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Ser Gln His Gln Phe Tyr Leu Asp Arg Lys Gln Ser Lys Ser Lys Ile
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Gly Thr Leu Lys Thr Ser Lys Leu Ala Asn Met Gly Ser Lys Gly Lys
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Ile Ile Ser Gly Ser Ser Gly Ser Leu Leu Ser Ser Gly Ser Gly Ala
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Arg Arg His Cys Ile Leu Leu Pro Gly Ser Gln Glu Ser Asp Ser Ser
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Gln Ser Ala Lys Lys Asp Met Leu Ala Ala Leu Lys Ser Arg Gln Glu
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                                                 125
Ala Leu Glu Glu Thr Leu Arg Gln Arg Leu Glu Glu Leu Lys Lys Leu
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Lys Cys Phe Asp Leu Arg Leu Leu Phe Leu Leu Ser Leu Leu His Thr
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Met Glu Gly Trp Ala Gly Ser Gly Gly Val Gly Ser Gln Thr Asp Ser
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Ala Trp Gly Leu Ala His Gly Val Glu Ala Glu Val Trp Trp Val Phe
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Cys Val Arg Ile Leu Leu Asp Pro Tyr Ser Arg Met Pro Ala Ser Ser
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                            40
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Glu Glu Lys Lys Arg Glu Glu Glu Glu Arg Glu Arg Glu Arg Glu
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                                        75
Arg Arg Glu Ala Glu Leu Arg Ala Gln Gln Glu Glu Glu Thr Arg Lys
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Cln	C1-	C1	T 011	85	- ו ג	T OU	Gln	Live		Gln	Lvs	Glu	Ala		Leu
GIII	GIII	GIU	100	GIU	Ala	Leu	GIII	105	561	Gin	цуз	o.i.u	110		
Thr	מאמ	Glu		Glu	LVe	Gln	T.vs		Asn	Lys	Gln	Val		Glu	Ile
1111	AL 9	115	Бец	GIU	Lys	<b>U</b> 111	120			_,_		125			
Len	λκα		Glu	T.VS	Glu	Tle		Asp	Leu	Gln	Ara	Met	Lvs	Glu	Gln
Deu	130	DCu	Ozu	2,5		135					140		- 4		
Gln		T.em	Ser	T.e.u	Thr		Ala	Ser	Leu	Gln		Leu	Gln	Glu	Arg
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	Asp	Gln	Glu	Leu		Ara	Leu	Glu	Glu	Glu	Ala	Cys	Arg	Ala	Ala
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Gln	Glu	Phe	Leu	Glu	Ser	Leu	Asn	Phe	Asp	Glu	Ile	Asp	Glu	Cys	Val
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Arg	Asn	Ile	Glu	Arg	Ser	Leu	Ser	Gly	Gly	Ser	Glu	Phe	Ser	Ser	Glu
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Ala	Phe	Lys	Asp	Ser	Pro	Asn	Pro	Ser		His	Gly	His	Ser		Gln
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Arg	Thr	Ser		Ile	Arg	Thr	Ser		Asp	Ser	Ser	GIu		Asp	Pro
			260		_		_	265	_	_	_	- 1 -	270	0	m\
Tyr	Met		Asp	Thr	Val	Val		Thr	Ser	Pro	ser		Asp	ser	THE
		275	- 1 -	<b>D</b>		77-7	280	7	ر د م	C1	50×	285	Wic	Λαn	Sar
val		Leu	Ата	Pro	ser		GIN	Asp	ser	Gly	300	Deu	птэ	ASII	361
50-	290	~1.v	C1.,	502	Thr	295	Cve	Met	Dro	Gln		Δla	Glv	Asp	Leu
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	Ser	Pro	Asn	Glv		Tvr	Asp	Tvr	Asp	Gln	Asp	Asp	Tvr	Glu	
110	561	110	Nop	325	пор	-1-		-1-	330		· E		4	335	•
Glv	Ala	Ile	Thr		Gly	Ser	Ser	Val		Phe	Ser	Asn	Ser	Tyr	Gly
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Ser	Tyr	Arg	Arg		Ser	Val	Tyr	Ser		Val	Thr	Leu	Pro		Phe
			_	405		_	~-1		410		<b>3</b>	C	W	415	7 ~~
His	Ser	Phe		Tyr	Met	Lys	GLY	G19 425		met	ASI	Ser	430	гуѕ	Arg
_	_	_	420		•		<b>~1</b>			T 011	Trn	Dho		Car	Tye
Arg	Trp		vaı	Leu	гÀг	Asp	440		Pne	Leu	пр	445		Ser	Lys
C1-	C3	435	T 011	T	Cln	C111			Uic	Tve	T.VC			Glv	Ser
GIII	450		Leu	БУЗ	GIII	455		пец	1113	Lys	460		O.	<b>4.</b> <i>1</i>	
C0.			cor	7 ~~	7 ~~			Lve	Lve	Δτα			Val	Leu	Arg
465		neu	261	Arg	470		110	Dy 3	шуз	475					480
		Lve	Leu	Met			Glu	Asn	Asp		Glu	Glu	Lys	Leu	Lys
	501	~y.5		485					490		<b>-</b>		, -	495	
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Asp Arg Lys Tyr Gln Asp Trp Gly Trp Glu Ile Leu Gln Ser Phe Ser
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Arg Phe Thr Arg Val Pro Ser Gly Gly Tyr Ser Ser Ile Asn Asn Val
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Leu Gly Glu Thr Leu Lys Tyr Leu Phe Leu Leu Phe Ser Asp Asp Pro
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1080			gagttgccaa		
1140	-		gcttagcagg		
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1620			ccagtggagg		
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2340					caagtggcag
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Glu Asp Val Gln Glu Glu Thr Gln Leu Asp Leu Ser Gly Asp Ser Val
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Lys Thr Ile Ala Lys Leu Trp Asp Ser Lys Met Phe Ala Glu Ile Met
Met Lys Ile Glu Glu Tyr Ile Ser Lys Gln Ala Lys Ala Ser Glu Val
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Met Gly Pro Val Glu Ala Ala Pro Glu Tyr Arg Val Ile Val Asp Ala
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                85
Asn Asn Leu Thr Val Glu Ile Glu Asn Glu Leu Asn Ile Ile His Lys
                                105
            100
Phe Ile Arg Asp Lys Tyr Ser Lys Arg Phe Pro Glu Leu Glu Ser Leu
                            120
Val Pro Asn Ala Leu Asp Tyr Ile Arg Thr Val Lys Glu Leu Gly Asn
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Ser Leu Asp Lys Cys Lys Asn Asn Glu Asn Leu Gln Gln Ile Leu Thr
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Asn Ala Thr Ile Met Val Val Ser Val Thr Ala Ser Thr Thr Gln Gly
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Gln Gln Leu Ser Glu Glu Glu Leu Glu Arg Leu Glu Glu Ala Cys Asp
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Met Ala Leu Glu Leu Asn Ala Ser Lys His Arg Ile Tyr Glu Tyr Val
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Glu Ser Arg Met Ser Phe Ile Ala Pro Asn Leu Ser Ile Ile Ile Gly
                                          220
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Ala Ser Thr Ala Ala Lys Ile Met Gly Val Ala Gly Gly Leu Thr Asn
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Leu Ser Lys Met Pro Ala Cys Asn Ile Met Leu Leu Gly Ala Gln Arg
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Lys Thr Leu Ser Gly Phe Ser Ser Thr Ser Val Leu Pro His Thr Gly
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Tyr Ile Tyr His Ser Asp Ile Val Gln Ser Leu Pro Pro Asp Leu Arg
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                                          300
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Val Asp Ser Phe His Glu Ser Thr Glu Gly Lys Val Gly Tyr Glu Leu
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                                      315
Lys Asp Glu Ile Glu Arg Lys Phe Asp Lys Trp Gln Glu Pro Pro
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                                  330
Val Lys Gln Val Lys Pro Leu Pro Ala Pro Leu Asp Gly Gln Arg Lys
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Lys Arg Gly Gly Arg Arg Tyr Arg Lys Met Lys Glu Arg Leu Gly Leu
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Thr Glu Ile Arg Lys Gln Ala Asn Arg Met Ser Phe Gly Glu Ile Glu
                       375
Glu Asp Ala Tyr Gln Glu Asp Leu Gly Phe Ser Leu Gly His Leu Gly
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                   390
Lys Ser Gly Ser Gly Arg Val Arg Gln Thr Gln Val Asn Glu Ala Thr
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                                   410
Lys Ala Arg Ile Ser Lys Thr Leu Gln Arg Thr Leu Gln Lys Gln Ser
                                                  430
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                               425
Val Val Tyr Gly Gly Lys Ser Thr Ile Arg Asp Arg Ser Ser Gly Thr
                           440
                                               445
Ala Ser Ser Val Ala Phe Thr Pro Leu Gln Gly Leu Glu Ile Val Asn
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                                           460
Pro Gln Ala Ala Glu Lys Lys Val Ala Glu Ala Asn Gln Lys Tyr Phe
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Ser Ser Met Ala Glu Phe Leu Lys Val Lys Gly Glu Lys Ser Gly Leu
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Met Ser Thr
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aatagttett gacccaggte eetecatgaa eetegaaget gacccageca taggggggat 180

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Asp Pro Met Ser Pro Phe His Leu Ser Ser Val Ile Leu Cys Arg Pro
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Ser Ala Trp Pro Cys Leu Arg Ser Ser Ser Pro Pro Ala Ala Gln Gly
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                                            60
Ser Phe Val Ser Ala Gln Glu Gly Pro Tyr Asn Pro Ser Trp Leu Trp
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                                        75
Pro Gly Pro Cys Phe Val Ser Glu Leu Gly Gly Pro Ile Pro Lys His
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Phe Thr His Ile Ser
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180
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Pro Asn Glu Lys Ile Arg Asn Ile Gly Ile Ser Ala His Ile Asp Ser
Gly Lys Thr Thr Leu Thr Glu Arg Val Leu Tyr Tyr Thr Gly Arg Ile
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Ala Lys Met His Glu Val Lys Gly Lys Asp Gly Val Gly Ala Val Met
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Asp Ser Met Glu Leu Glu Arg Gln Arg Gly Ile Thr Ile Gln Ser Ala
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                                105
Ala Thr Tyr Thr Met Trp Lys Asp Val Asn Ile Asn Ile Asp Thr
                            120
Pro Gly His Val Asp Phe Thr Ile Glu Val Glu Arg Ala Leu Arg Val
                                            140
                        135
Leu Asp Gly Ala Val Leu Val Leu Cys Ala Val Gly Gly Val Gln Cys
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                                       155
Gln Thr Met Thr Val Asn Arg Gln Met Lys Arg Tyr Asn Val Pro Phe
                                    170
Leu Thr Phe Ile Asn Lys Leu Asp Arg Met Gly Ser Asn Pro Ala Arg
                                185
Ala Leu Gln Gln Met Arg Ser Lys Leu Asn His Asn Ala Ala Phe Met
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Gln Ile Pro Met Gly Leu Glu Gly Asn Phe Lys Gly Ile Val Asp
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 Arg Leu Leu Gly Ala Leu Cys Leu Gln Arg Pro Pro Val Val Ser Lys
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                                       ~75
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Glu Asn Gln Arg Leu Ala Lys Lys Lys Ala Asp Leu His Asp Glu Glu
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                                105
           100
Asp Glu Gln Asp Ile Leu Leu Ala Gln Asp Leu Glu Asp Met Trp Glu
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Gln Lys Phe Leu Gln Phe Lys Leu Gly Ala Arg Ile Thr Glu Ala Asp
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Glu Lys Asn Asp Arg Thr Ser Leu Asn Arg Lys Leu Asp Arg Asn Leu
                                       155
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Val Leu Leu Val Arg Glu Lys Phe Gly Asp Gln Asp Val Trp Ile Leu
                165
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Pro Gln Ala Glu Trp Gln Pro Gly Glu Thr Leu Arg Gly Thr Ala Glu
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Gly Asn Ala Pro Cys Gly His Tyr Thr Phe Lys Phe Pro Gln Ala Met
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Arg Thr Glu Ser Asn Leu Gly Ala Lys Val Phe Phe Phe Lys Ala Leu
                    230
                                        235
Leu Leu Thr Gly Asp Phe Ser Gln Ala Gly Asn Lys Gly His His Val
                                    250
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1903
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<400> 3596

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Gln Met Leu Ala Gln Tyr Ile Glu Ser Phe Thr Gln Gly Ser Ile Glu
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Ala His Lys Arg Gly Ser Arg Phe Trp Ile Gln Asp Lys Gly Pro Ile
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Val Glu Ser Tyr Ile Gly Phe Ile Glu Ser Tyr Arg Asp Pro Phe Gly
Ser Arg Gly Glu Phe Glu Gly Phe Val Ala Val Val Asn Lys Ala Met
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Ser Ala Lys Phe Glu Arg Leu Val Ala Ser Ala Glu Gln Leu Leu Lys
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Glu Leu Pro Trp Pro Pro Thr Phe Glu Lys Asp Lys Phe Leu Thr Pro
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Asp Phe Thr Ser Leu Asp Val Leu Thr Phe Ala Gly Ser Gly Ile Pro
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Ala Gly Ile Asn Ile Pro Asn Tyr Asp Asp Leu Arg Gln Thr Glu Gly
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Phe Lys Asn Val Ser Leu Gly Asn Val Leu Ala Val Ala Tyr Ala Thr
                                 170
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Gln Arg Glu Lys Leu Thr Phe Leu Glu Glu Asp Asp Lys Asp Leu Tyr
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                               185
Ile Leu Trp Lys Gly Pro Ser Phe Asp Val Gln Val Gly Leu His Glu
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                                               205
Leu Leu Gly His Gly Ser Gly Lys Leu Phe Val Gln Asp Glu Lys Gly
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                                          220
Ala Phe Asn Phe Asp Gln Glu Thr Val Ile Asn Pro Glu Thr Gly Glu
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Gln Ile Gln Ser Trp Tyr Arg Ser Gly Glu Thr Trp Asp Ser Lys Phe
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Ser Thr Ile Ala Ser Ser Tyr Glu Glu Cys Arg Ala Glu Ser Val Gly
                               265
                                                   270
Leu Tyr Leu Cys Leu His Pro Gln Val Leu Glu Ile Phe Gly Phe Glu
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Gly Ala Asp Ala Glu Asp Val Ile Tyr Val Asn Trp Leu Asn Met Val
                       295
                                           300
Arg Ala Gly Leu Leu Ala Leu Glu Phe Tyr Thr Pro Glu Ala Phe Asn
                   310
                                       315
Trp Arg Gln Ala His Met Gln Ala Arg Phe Val Ile Leu Arg Val Leu
                325
                                   330
Leu Glu Ala Gly Glu Gly Leu Val Thr Ile Thr Pro Thr Thr Gly Ser
                               345
Asp Gly Arg Pro Asp Ala Arg Val Arg Leu Asp Arg Ser Lys Ile Arg
                           360
Ser Val Gly Lys Pro Ala Leu Glu Arg Phe Leu Arg Arg Leu Gln Val
                       375
                                           380
Leu Lys Ser Thr Gly Asp Val Ala Gly Gly Arg Ala Leu Tyr Glu Gly
                   390
                                       395
Tyr Ala Thr Val Thr Asp Ala Pro Pro Glu Cys Phe Leu Thr Leu Arg
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                                   410
Asp Thr Val Leu Leu Arg Lys Glu Ser Arg Lys Leu Ile Val Gln Pro
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Asn Thr Arg Leu Glu Gly Asn Gly Ser Asp Val Gln Leu Leu Glu Tyr
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445
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Glu Ala Ser Ala Ala Gly Leu Ile Arg Ser Phe Ser Glu Arg Phe Pro
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                                          460
Glu Asp Gly Pro Glu Leu Glu Glu Ile Leu Thr Gln Leu Ala Thr Ala
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                                      475
Asp Ala Arg Phe Trp Lys Gly Pro Ser Glu Ala Pro Ser Gly Gln Ala
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1090
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                                25
Asp Tyr Asn Lys Asp Asp Met Ser Tyr Arg Arg Ile Ser Ala Val Glu
        35
                            40
Pro Lys Thr Ala Leu Pro Phe Asn Arg Phe Leu Pro Asn Lys Ser Arg
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Gln Pro Ser Tyr Val Pro Ala Pro Leu Arg Lys Lys Pro Asp Lys
                                        75
                                                             80
His Glu Asp Asn Arg Arg Ser Trp Ala Ser Pro Val Tyr Thr Glu Ala
                                    90
Asp Gly Thr Phe Ser Arg Ser Lys Ser Met Ser Asp Val Ser Ala Glu
            100
                                105
Asp Val Gln Asn Leu Arg Gln Leu Arg Tyr Glu Glu Met Gln Lys Ile
                            120
Lys Ser Gln Leu Lys Glu Gln Asp Gln Lys Trp Gln Asp Asp Leu Ala
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Lys Trp Lys Asp Arg Arg Lys Ser Tyr Thr Ser Asp Leu Gln Lys
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<211> 691
<212> DNA
<213> Homo sapiens
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cagacaatga gggctttggc ggctggggct ccccagcgac acccttcacc tcgtggcctc
caggtagect gtecacetge caagaacaca cacacecage cecacaggte accectcace
660
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<210> 3600
<211> 98
<212> PRT
<213> Homo sapiens
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Asn Lys Leu Gly Pro Cys Met Leu Leu Ala Leu Arg Gly Asn Gln Thr
Met Val Glu Val Arg Ser Trp Ser Gly Ser Leu Val Gly Trp Leu Ala
                            40
Pro Arg Pro Leu Ser Val Pro Ile Glu His Leu Leu Gly Ala Lys Asn
                        55
Cys Cys Arg His Gly Gly Gln Trp Val Arg Arg Ala Val Pro Ala Val
                    70
                                        75
Leu Ser Leu Val Gly Ala Ser Ser Leu His His Ala Val Tyr Leu Phe
                85
                                    90
Leu Leu
<210> 3601
<211> 2963
<212> DNA
<213> Homo sapiens
<400> 3601
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420
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720
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gccccatgca 900	gccctcatgg	tcagcaggac	acccaggata	gaccccctcc	acgcagcacc
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1020			gtggcgaggg		
1080			agcaagcaca		
1140			ggccagcaaa		
1200	•		gaagtggagg		
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1320	•		tccgggaagc		
1380			caaaactatt		
1440			aacatgctgg		•
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1800	•	•	ctgctcggga		
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1920			cacggtcgac		
1980			gggggċtcct		
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2100			cgcccctgct		
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<212> PRT
<213> Homo sapiens
<400> 3602
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                              25
Glu Ala Arg Glu Leu Met Tyr Ser Gly Ala Leu Leu Phe Phe Ser His
                           40
Gly Gln Gln Asn Ser Ala Ala Asp Leu Ser Met Leu Val Leu Glu Ser
                       55
                                          60
Leu Glu Lys Ala Glu Val Glu Val Ala Asp Glu Leu Leu Glu Asn Leu
                   70
                                      75
Ala Lys Val Phe Ser Leu Met Asp Pro Asn Ser Pro Glu Arg Val Thr
Phe Val Ser Arg Ala Leu Lys Trp Ser Ser Gly Gly Ser Gly Lys Leu
                              105
Gly His Pro Arg Leu His Gln Leu Leu Ala Leu Thr Leu Trp Lys Glu
                           120
Gln Asn Tyr Cys Glu Ser Arg Tyr His Phe Leu His Ser Ala Asp Gly
                       135
Glu Gly Cys Ala Asn Met Leu Val Glu Tyr Ser Thr Ser Arg Gly Phe
                                      155
Arg Ser Glu Val Asp Met Phe Val Ala Gln Ala Val Leu Gln Phe Leu
                                  170
Cys Leu Lys Asn Lys Ser Ser Ala Ser Val Val Phe Thr Thr Tyr Thr
                              185
Gln Lys His Pro Ser Ile Glu Asp Gly Pro Pro Phe Val Glu Pro Leu
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195
                            200
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Leu Asn Phe Ile Trp Phe Leu Leu Leu Ala Val Asp Gly Gly Lys Leu
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Thr Val Phe Thr Val Leu Cys Glu Gln Tyr Gln Pro Ser Leu Arg Arg
                                        235
225
                    230
                                                            240
Asp Pro Met Tyr Asn Glu Tyr Leu Asp Arg Ile Gly Gln Leu Phe Phe
                245
                                    250
Gly Val Pro Pro Lys Gln Thr Ser Ser Tyr Gly Gly Leu Leu Gly Asn
Leu Leu Thr Ser Leu Met Gly Ser Ser Glu Gln Glu Asp Gly Glu Glu
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Ser Pro Ser Asp Gly Ser Pro Ile Glu Leu Asp
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                        295
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<212> DNA
<213> Homo sapiens
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1080
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1082
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<212> PRT
<213> Homo sapiens
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Val Gly Glu Met Ala Ala Gln Val Gly Ala Val Arg Val Val Arg Ala
Val Ala Ala Gln Glu Glu Pro Asp Lys Glu Gly Lys Glu Lys Pro His
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Ala Gly Val Ser Pro Arg Gly Val Lys Arg Gln Arg Arg Ser Ser Ser
                                            60
                        55
Gly Gly Ser Gln Glu Lys Arg Gly Arg Pro Ser Gln Glu Pro Pro Leu
                    70
                                        75
Ala Pro Pro His Arg Arg Arg Ser Arg Gln His Pro Gly Pro Leu
                85
                                    90
Pro Pro Thr Asn Ala Ala Pro Thr Val Pro Gly Pro Val Glu Pro Leu
                                105
Leu Leu Pro Pro Pro Pro Pro Ser Leu Ala Pro Ala Gly Pro Ala
                           - 120
Val Ala Ala Pro Leu Pro Ala Pro Ser Thr Arg Pro Ser Ser Pro Ser
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                        135
                                            140
Arg Leu
145
<210> 3605
<211> 2004
<212> DNA
<213> Homo sapiens
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480
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<210> 3606

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<211> 324
<212> PRT
<213> Homo sapiens
<400> 3606
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Arg Tyr Met Ser Gln Ser Lys His Thr Glu Ala Arg Glu Leu Met Tyr
                     55
Ser Gly Ala Leu Leu Phe Phe Ser His Gly Gln Gln Asn Ser Ala Ala
Asp Leu Ser Met Leu Val Leu Glu Ser Leu Glu Lys Ala Glu Val Glu
               85
                                  90
Val Ala Asp Glu Leu Leu Glu Asn Leu Ala Lys Val Phe Ser Leu Met
                              105
Asp Pro Asn Ser Pro Glu Arg Val Thr Phe Val Ser Arg Ala Leu Lys
       115
                          120
                                            125
Trp Ser Ser Gly Gly Ser Gly Lys Leu Gly His Pro Arg Leu His Gln
                               140
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Leu Leu Ala Leu Thr Leu Trp Lys Glu Gln Asn Tyr Cys Glu Ser Arg
        150
                                     155
Tyr His Phe Leu His Ser Ala Asp Gly Glu Gly Cys Ala Asn Met Leu
              165
                                 170
Val Glu Tyr Ser Thr Ser Arg Gly Phe Arg Ser Glu Val Asp Met Phe
                             185
Val Ala Gln Ala Val Leu Gln Phe Leu Cys Leu Lys Asn Lys Ser Ser
                           200
Ala Ser Val Val Phe Thr Thr Tyr Thr Gln Lys His Pro Ser Ile Glu
                       215
                                         220
Asp Gly Pro Pro Phe Val Glu Pro Leu Leu Asn Phe Ile Trp Phe Leu
                  230
                                     235
Leu Leu Ala Val Asp Gly Gly Lys Leu Thr Val Phe Thr Val Leu Cys
                                 250
               245
Glu Gln Tyr Gln Pro Ser Leu Arg Arg Asp Pro Met Tyr Asn Glu Tyr
                              265
Leu Asp Arg Ile Gly Gln Leu Phe Phe Gly Val Pro Pro Lys Gln Thr
                          280
Ser Ser Tyr Gly Gly Leu Leu Gly Asn Leu Leu Thr Ser Leu Met Gly
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Ser Ser Glu Glu Glu Asp Gly Glu Glu Ser Pro Ser Asp Gly Ser Pro
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<210> 3607
<211> 1726
<212> DNA
<213> Homo sapiens
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<400> 3607

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480		ttacggctat			
540		tgagcaccag			
600		aaaaaaggc			
660		agataaaccc			
720		tctaggagaa			
780		taaaacccaa			
840	-	aatcaaggtg			
900		tgttagtaac	•		
960		ccaaaaggct			
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1080	-	aagaaattct gtctgaagat	_		
1140		ttttttatc			
1200	_	cacageteag			
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1380		acctgtatta	-		•
1440	· .			. •	
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Phe Asp Asn Phe Phe Ile Lys Lys Glu Gln Ile Lys Ser Ser Gly Asn
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Asp Pro Lys Tyr Ser Thr Thr Thr Ala Gln Asn Ser Ser Ser Ser
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Glu Pro Gln Asp Leu Glu Ser Thr Asn Leu Leu Glu Ser Glu Ala Pro
Arg Asp Tyr Phe Leu Lys Phe Ala Tyr Ile Val Asp Leu Asp Ser Asp
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Thr Ala Asp Lys Phe Leu Gln Leu Xaa Trp Asn Gln Arg Cys Gln Glu
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                                        75
Gly Ala Val Ser Tyr Gln Xaa Tyr Pro Leu Ser Pro Thr Arg Phe Thr
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His Cys Glu Gln Val Leu Gly Glu Gly Ala Leu Asp Arg Gly Thr Tyr
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Tyr Trp Glu Val Glu Ile Ile Glu Gly Trp Val Ser Met Gly Val Met
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Ala Ala Asp Phe Ser Pro Gln Glu Pro Tyr Asp Arg Gly Arg Leu Gly
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Arg Asn Ala His Ser Cys Cys Leu Gln Trp Asn Gly Arg Ser Phe Ser
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Val Trp Phe His Gly Leu Glu Ala Pro Leu Pro His Pro Phe Ser Pro
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Thr Val Gly Val Cys Leu Glu Tyr Ala Asp Arg Ala Leu Ala Phe Tyr
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Ala Val Arg Asp Gly Lys Met Ser Leu Leu Arg Arg Leu Lys Ala Ser
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Arg Pro Arg Arg Gly Gly Ile Pro Ala Ser Pro Ile Asp Pro Phe Gln
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Ser Arg Leu Asp Ser His Phe Ala Gly Leu Phe Thr His Arg Leu Lys
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                                        235
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Lys Val Lys Pro Arg Lys Ile Phe Gln Trp Arg Gln Leu Glu Asn Leu
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Tyr Phe Arg Glu Lys Lys Phe Ser Val Glu Val His Asp Pro Arg Arg
Ala Ser Val Thr Arg Arg Thr Phe Gly His Ser Gly Ile Ala Val His
Thr Trp Tyr Ala Cys Pro Ala Leu Ile Lys Ser Ile Trp Ala Met Ala
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Ile Ser Gln His Gln Phe Tyr Leu Asp Arg Lys Gln Ser Lys Ser Lys
                                 105
Ile His Ala Ala Arg Ser Leu Ser Glu Ile Ala Ile Asp Leu Thr Glu
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Thr Gly Thr Leu Lys Thr Ser Lys Leu Ala Asn Met Gly Ser Lys Gly
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Lys Ile Ile Ser Gly Ser Ser Gly Ser Leu Leu Ser Ser Gly Ser Gln
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Glu Ser Asp Ser Ser Gln Ser Ala Lys Lys Asp Met Leu Ala Ala Leu
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Lys Ser Arg Gln Glu Ala Leu Glu Glu Thr Leu Arg Gln Arg Leu Glu
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Glu Leu Lys Lys Leu Cys Leu Arg Glu Ala Glu Leu Thr Gly Lys Leu
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Pro Val Glu Tyr Pro Leu Asp Pro Gly Glu Glu Pro Pro Ile Val Arg
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                                            220
Arg Arg Ile Gly Thr Ala Phe Lys Leu Asp Glu Gln Lys Ile Leu Pro
                    230
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Gln Ser Gln Ile Thr Glu Ala Ala Arg Arg Leu Ala Ser Asp Pro Asn
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900

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Asp Asp Glu Asp Tyr Glu Arg Arg Ser Glu Cys Val Ser Glu Met
Leu Asp Leu Glu Lys Gln Phe Ser Glu Leu Lys Glu Lys Leu Phe Arg
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Glu Arg Leu Ser Gln Leu Arg Leu Arg Leu Glu Glu Val Gly Ala Glu
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Lys Ile Arg Ile Gln Val Ala Gly Ile Tyr Lys Gly Phe Cys Leu Asp
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Val Ile Arg Asn Lys Tyr Glu Cys Glu Leu Gln Gly Ala Lys Gln His
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Leu Glu Ser Glu Lys Leu Leu Leu Tyr Asp Thr Leu Gln Gly Glu Leu
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Gln Glu Arg Ile Gln Arg Leu Glu Glu Asp Arg Gln Ser Leu Asp Leu
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Ser Ser Glu Trp Trp Asp Asp Lys Leu His Ala Arg Gly Ser Ser Arg
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Ser Trp Asp Ser Leu Pro Pro Ser Lys Arg Lys Lys Ala Pro Leu Val
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Ser Gly Pro Tyr Ile Val Tyr Met Leu Gln Glu Ile Gly Ile Leu Glu
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                                           220
Asp Trp Thr Ala Ile Lys Lys Ala Arg Ala Ala Val Ser Pro Gln Lys
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Arg Lys Ser Asp Asp Arg Arg Thr His Arg Pro Leu Arg Val Cys Pro
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Ile Ala Gly Thr Thr Arg Glu His Leu Gly Leu Ala Leu Ala Leu Lys
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Val Pro Phe Phe Ile Val Val Ser Lys Ile Asp Leu Cys Ala Lys Thr
Thr Val Glu Arg Thr Val Arg Gln Leu Glu Arg Val Leu Lys Gln Pro
                                105
Gly Cys His Lys Val Pro Met Leu Val Thr Ser Glu Asp Asp Ala Val
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Ser Ser Ser Ser Met Ala Thr Pro Leu Ser Cys Cys Pro Thr Trp Ala
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Pro Gly Ala Ser Ser Gln Pro Cys Ser Thr Tyr Pro Pro Trp Arg Thr
Thr Thr Leu Ser Thr Ser Thr Ser Trp Ser Cys Leu Leu Pro Cys
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Ala Ser Cys Pro Ser Arg Cys Ser Cys Gln Thr Trp Pro Ser Ser Pro
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Thr Ala Ser Thr Pro Thr Thr Ser Cys Thr Ser Phe Met Thr Thr Cys
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Cys His Ser Ser Thr Pro Cys Gly Ser Phe Pro Ala Trp Pro Thr Arg
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540

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Leu His Leu Ala Ala Ala Arg Gly Asn Val Asp Ile Cys Gln Leu Leu
His Lys Phe Gly Ala Asp Leu Leu Ala Thr Asp Tyr Gln Gly Asn Thr
Ala Leu His Leu Cys Gly His Val Asp Thr Ile Gln Phe Leu Val Ser
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Asn Gly Leu Lys Ile Asp Ile Cys Asn His Gln Gly Ala Thr Pro Leu
Val Leu Ala Lys Arg Arg Gly Val Asn Lys Asp Val Ile Arg Leu Leu
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Glu Ser Leu Glu Glu Glu Glu Val Lys Gly Phe Asn Arg Gly Thr His
                       135
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Ser Lys Leu Glu Thr Met Gln Thr Ala Glu Ser Glu Ser Ala Met Glu
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Ser His Ser Leu Leu Asn Pro Asn Leu Gln Gln Gly Glu Gly Val Leu
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Ser Ser Phe Arg Thr Thr Trp Gln Glu Phe Val Glu Asp Leu Gly Phe
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Trp Arg Val Leu Leu Ile Phe Val Ile Ala Leu Leu Ser Leu Gly
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Glu Lys Lys Arg Met Asp Lys Ala Ile Gly Tyr Ser Phe Ala Ile Val
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Leu Lys Thr His Phe Tyr Asn Ile Ala Pro Glu Ala Pro Thr Leu Ser
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His Phe Gln Gln Thr Phe Cys Tyr Leu Met His Glu Phe His Lys Phe
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Trp Ile Glu Glu Asp Pro Met Asp Ile Met Glu Phe Asn Arg Val Arg
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Glu Lys Phe Arg Lys Arg Ile Ile Lys Gln Leu Gln Asn Pro Asp Met
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Trp Gly Pro Ser Ser Ser Leu Met Ser Glu Ile Ala Asp Leu Thr Tyr
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                            40
Asn Val Val Ala Phe Ser Glu Ile Met Ser Met Ile Trp Lys Arg Leu
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                                            60
Asn Asp His Gly Lys Asn Trp Arg His Val Tyr Lys Ala Met Thr Leu
                                        75
Met Glu Tyr Leu Ile Lys Thr Gly Ser Glu Arg Val Ser Gln Gln Cys
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Lys Glu Asn Met Tyr Ala Val Gln Thr Leu Lys Asp Phe Gln Tyr Val
                                105
Asp Arg Asp Gly Lys Asp Gln Gly Val Asn Val Arg Glu Lys Ala Lys
                            120
Gln Leu Val Ala Leu Leu Arg Asp Glu Asp Arg Leu Arg Glu Glu Arg
                        135
Ala His Ala Leu Lys Thr Lys Glu Lys Leu Ala Gln Thr Ala Thr Ala
                    150
                                       155
Ser Ser Ala Ala Val Gly Ser Gly Pro Pro Pro Glu Ala Glu Gln Ala
                165
                                    170
Trp Pro Gln Ser Ser Gly Glu Glu Leu Gln Leu Gln Leu Ala Leu
           180
                                185
Ala Met Ser Lys Glu Glu Ala Asp Gln Glu Glu Arg Ile Arg Arg Gly
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                            200
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Asp Asp Leu Arg Leu Gln Met Ala Ile Glu Glu Ser Lys Arg Glu Thr
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Gly Gly Lys Glu Glu Ser Ser Leu Met Asp Leu Ala Asp Val Phe Thr
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Ala Pro Ala Pro Ala Pro Thr Asp Pro Trp Gly Gly Pro Ala Pro
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Met Ala Ala Ala Val Pro Thr Ala Ala Pro Thr Ser Asp Pro Trp Gly
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Gly Pro Pro Val Pro Pro Ala Ala Asp Pro Trp Gly Gly Pro Ala Pro
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Ser Val Asp Pro Trp Gly Gly Thr Pro Ala Pro Ala Ala Gly Glu Gly
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Pro Thr Pro Asp Pro Trp Gly Ser Ser Asp Gly Gly Val Pro Val Ser
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Gly Pro Ser Ala Ser Asp Pro Trp Thr Pro Ala Pro Ala Phe Ser Asp
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Pro Trp Gly Gly Ser Pro Ala Lys Pro Ser Thr Asn Gly Thr Thr
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Ala Gly Gly Phe Asp Thr Glu Pro Asp Glu Phe Ser Asp Phe Asp Arg
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Leu Arg Thr Ala Leu Pro Thr Ser Gly Ser Ser Ala Gly Glu Leu Glu
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Leu Leu Ala Gly Glu Val Pro Ala Arg Ser Pro Gly Ala Phe Asp Met
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Ser Gly Val Arg Gly Ser Leu Ala Glu Ala Val Gly Ser Pro Pro
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                                                    430
Ala Ala Thr Pro Thr Pro Thr Pro Pro Thr Arg Lys Thr Pro Glu Ser
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Phe Leu Gly Pro Asn Ala Ala Leu Val Asp Leu Asp Ser Leu Val Ser
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Arg Pro Gly Pro Thr Pro Pro Gly Ala Lys Ala Ser Asn Pro Phe Leu
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Pro Gly Gly Gly Pro Ala Thr Gly Pro Ser Val Thr Asn Pro Phe Gln
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Pro Ala Pro Pro Ala Thr Leu Thr Leu Asn Gln Leu Arg Leu Ser Pro
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Val Pro Pro Val Pro Gly Ala Pro Pro Thr Tyr Ile Ser Pro Leu Gly
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## <213> Homo sapiens

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 Ser Tyr Phe Leu Phe Val Ile Phe Thr Ala Tyr Ala Met Leu Pro Leu
 Gly Met Arg Asp Ala Ala Val Ala Gly Leu Ala Ser Ser Leu Ser His
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 Leu Leu Val Leu Gly Leu Tyr Leu Gly Pro Gln Pro Asp Ser Arg Pro
 Ala Leu Leu Pro Gln Leu Ala Ala Asn Ala Val Leu Phe Leu Cys Gly
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Asn Val Ala Gly Val Tyr His Lys Ala Leu Met Glu Arg Ala Leu Arg
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Ala Thr Phe Arg Glu Ala Leu Ser Ser Leu His Ser Arg Arg Leu
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Asp Thr Glu Lys Lys His Gln Val Ser Arg Ala
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Arg Glu Tyr His Lys Trp Arg Thr Tyr Phe Lys Lys Arg Leu Gln Gln
His Lys Asp Glu Asp Leu Ser Ser Leu Val Gln Asp Asp Met Leu
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                                             70
Tyr Trp His Lys His Gly Asp Gly Trp Lys Thr Pro Val Pro Met Glu
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Glu Asp Pro Leu Leu Asp Thr Asp Met Leu Met Ser Glu Phe Ser Asp
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 Thr Leu Phe Ser Thr Leu Ser Ser His Gln Pro Val Ala Trp Pro Asn
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                                                               120
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                                              150
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                                     165
  Pro Ala Ser Ala Ser Ala Pro Val Pro Asp Pro Asn Asn Pro Pro Ala
                                                                          185
                            180
  Gln Glu Ser Ile Leu Pro Thr Thr Ala Leu Pro Thr Val Ser Leu Pro
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    cagetecace teetgatggt gaatgagaeg aggeecagge tgeagaaagt ggeeteatgg
    cagging categories and categories cagging and categories against the categories and categories against the categories and cate
     tattcagggg gcgacgatgg ccttctgagg ggctgggaca ccagggtacc cggcaaattt
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 Thr Arg Val Pro Gly Lys Phe Leu Phe Thr Ser Xaa Lys Thr His His
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 Ile Lys Trp His Pro Phe His His His Leu Leu Leu Ala Ala Cys Met
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125
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His Ser Gly Phe Lys Ile Leu Asn Cys Gln Lys Ala Met Glu Glu Arg
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Tyr Gly Ala Asp Trp Ser Trp Leu Leu Phe Arg Ser Leu Gln Arg Ala
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Pro Ser Trp Ser Phe Pro Ser Asn Leu Gly Thr Lys Thr Ala Asp Leu
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Lys Gly Ala Ser Glu Leu Pro Thr Pro Cys His Glu Cys Arg Glu Asp
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Asn Asp Gly Glu Gly His Ala Arg Pro Gln Ser Gly Met Lys Pro Leu
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Pro Thr Pro Ser Pro Ile Ile Ser Pro Ser Ala Met Leu Pro Ile Tyr
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Arg Cys Ser Tyr Pro Val His Asp Glu Ser Arg Gln Met Met Val Met
Val Glu Glu Cys Gly Arg Tyr Ala Ser Phe Gln Gly Ile Pro Ser Ala
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Val Tyr Gly Asp Asp Thr Leu Arg Pro Cys Trp Cys Trp Lys Asn His
Leu Trp Gln Cys His Phe Leu Arg Lys Thr Tyr Gln Ser Phe Ala Met
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  Glu Val Thr Val Pro Thr Arg Val Asp Ser Pro Arg Pro Asp His Ala
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  Arg Arg Trp Pro Lys Gly Arg Gly Trp Gly Arg Gly Cys Ser Ala Pro
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Thr Glu Pro Pro Ala Asn Leu Asp Arg Leu Ile Pro Met Tyr Lys Gly
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Tyr Phe Arg Ile His Ile Asn Lys Tyr Lys Met Val Glu Thr Ile Thr
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Cys Leu Ser Arg Glu Pro Phe Pro Ala Ser Asn Tyr Ile Arg Leu Phe
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Gly Gln His Glu Gln Leu Leu Asn Asn Leu Cys Ala Arg Tyr Asp Glu
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Ile Ser Ala Asp Val Lys Glu Val Leu Leu Thr Asp Gly Asn Glu Lys
Ala Ile Arg Asn Val Gln Asp Ile Ile Thr Arg Asn Gln Lys Ala Gly
Val Phe Lys Thr Gln Lys Ile Ser Ser Cys Val Leu Arg Trp Asp Asn
Glu Thr Asp Val Ser Gln Leu Glu Gly His Phe Asp Ile Val Met Cys
Ala Asp Cys Leu Phe Leu Asp Gln Tyr Arg Ala Ser Leu Val Asp Ala
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Arg Arg Gly Asn Thr Leu Asn Gln Phe Cys Asn Leu Ala Glu Lys Ala
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Phe His Ser Lys Leu Lys Lys Glu Asn Pro Asp Ile Tyr Glu Glu Asn
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Lys Met Ile Pro Pro Gly Ile His Phe Leu His Tyr Ser Ser Val Asp
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Ala Asn Leu Gln Glu Leu Asp Gln Phe Leu Gly Pro Tyr Pro Tyr Ala
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Thr Leu Lys Lys Trp Ile Ser Leu Thr Asn Phe Ile Ser Glu Ala Thr
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Asn Leu Pro Arg Cys Gly Ile Glu Cys Lys Ser Tyr Gln Glu Gly Leu
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Ala Arg Leu Pro Glu Met Lys Pro Arg Ala Gly Thr Glu Ile Arg Phe
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Ser Glu Leu Pro Thr Gln Met Phe Pro Glu Gly Ala Thr Pro Ala Glu
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Ser Ser Glu Leu Arg Leu His Ile Phe Ala Asp Trp Glu Glu Gly Arg
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Ile Phe Gly Ser Arg Leu Thr Arg Ala Gly Val Pro His Val His Phe
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Lys	Glu	Leu	ьys		ALA	птэ	GIII	GIII			Leu	AIA	Dea		Gru
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Phe	Ser	Glu	Leu	Asn	Glu	Arg	Met	Ala	Glu	Leu	Arg	Ala	Gln	Lys	Gln
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Tare	Val	Sar		Gla	Len	λνα	Acn		Glu	Glu	Glu	Met	Glu	Val	Δla
Lys	Val		Arg	GIII	пец	Arg		Буз	GIU	GIU	GIU		014	•	
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Thr	Gln	Lys	Val	Asp	Ala	Met	Arg	Gln	Glu	Met	Arg	Arg	Ala	Glu	Lys
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	Lys	GIU	9										-1-		
	Lys	GIU	****	645					650				-1	655	
	Lys Glu			645		_			650					655	

								665					670		
71-	<b>~</b> 1	71-	660 Thr	T 011	C1.,	uic	Cln		C1	T10	co~	Lve		Live	Ser
Ala	GTA	675	IIIL	Leu	GIU	uis	680	GIII	GIU	116	Ser	685	110	בעם	JCI
Glu	Lau		Lys	Live	Val	Len		Tur	Glu	Glu	Glu		Val	Ara	Ara
Gra	690	GIU	шyз	273	• • • •	695		-1-	014	014	700			5	5
Glu		Ser	His	Val	Leu		Val	Lvs	Asn	Val		Lvs	Glu	Val	His
705					710			-,-		715	-7-	-2-			720
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Lvs	Asp	Lvs	Leu		Lvs	Ser	Lvs	Arg		Arq	His	Asn	Glu	Met	Glu
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Gln	Ile	Ala	Glu	Ile	Ile	Gln	Trp	Val	Ser	Asp	Glu	Lys	Asp	Ala	Arg
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Ser	Ala	Leu	Glu		GIU	ire	Arg	Ala		GIN	ьeu	vaı	GIN	895	GIU
7 011	7 ~~~	T 1.0	Val	885	7.00	- ומ	7.00	T 011	890	Lau	Gl.	Cor	Larg		Luc
Leu	Arg	ьуѕ	900	гÃ2	Asp	MIA	ASII	905	1111	Leu	GIU	JEI	910	Бец	БүЗ
) en	Sar	Glu	Ala	twe	λen	Δνα	Glu		T.em	Glu	Glu	Met	•	Tle	Leu
Asp	Jei	915	nia	כעם	AJII	~- 9	920			0.10	0.10	925			
Lvs	Lvs		Met	Glu	Glu	Lvs		Ara	Ala	Asp	Thr		Leu	Lvs	Leu
D <sub>I</sub> U	930	_,_				935		•• 3		Е	940	1		-1-	
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Thr	Gln	Ala	Pro	Lys	Pro	Glu			Pro	Ser	Met	Ser	Val	Ala	Ala
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Ser	His	Cys	Thr		Leu	Met	Val			Ile	Arg	Gln			Ala
_	~3	,	106				α.	106			<b>.</b>	<b>.</b>	107		<b>51</b> -
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B	<u>ما -</u>	107		D	<b>T</b> 1.	D	108		<b>03</b>	C	T	108		T 011	c1
	Gin	vai	CYS	Pro	тте	Pro	rro	GIU	GID	ser	ьys	Arg	PIO	neu	Gly

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var var cyo	1140	_,	114				1150		-
Ser Thr Gln		val Tle			il Len				Asp
1155	-	vur 110	1160	<b>V</b> 2 V		1165		3	
Asp Glu Phe		Co= Co=		מם פות	ar Acn			uic	בומ
-	Ser var			Ata Se	1180		116	mis	AIG
1170		. 117		N 17-			C	T 4	T 011
Thr Arg Arg	Asp IIe		ile Phe			Ald	261	Leu	
1185		1190			195	1	·		1200
Gly Ala Pro					Le Leu	Thr	GIU		
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Cys Gln Leu 1345	Met Ala	Thr Ala	Inr Let		355		•		1360
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-		1350 Lys Arg		1:	355				1360 Arg
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Gly Met Gln Val Leu Met Asp Leu Pro Leu Ser Ala Val Pro Pro Ser
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Glu Asp Thr Ile Pro Gln Leu Leu Ile Asp Phe Trp Glu Ala Gln Leu
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Val Ala Cys Leu Pro Asp Val Val Leu Gln Glu Leu Phe Phe Lys Leu
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Thr Ser Gln Tyr Ile Trp Arg Leu Ser Lys Arg Gln Pro Pro Asp Thr
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Thr Pro Leu Arg Thr Ser Glu Asp Leu Ile Asn Ala Cys Ser His Tyr
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Gly Leu Ile Tyr Pro Trp Val His Val Val Ile Ser Ser Asp-Ser Leu
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Ala Asp Lys Asn Tyr Thr Glu Asp Leu Ser Lys Leu Gln Ser Leu Ile
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Cys Gly Pro Ser Phe Asp Ile Ala Ser Ile Ile Pro Phe Leu Glu Pro
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Leu Ser Glu Asp Thr Ile Ala Gly Leu Ser Val His Val Leu Cys Arg
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Thr Arg Leu Lys Glu Tyr Glu Gln Cys Ile Asp Ile Leu Leu Glu Arg
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Cys Pro Glu Ala Val Ile Pro Tyr Ala Asn His Glu Leu Lys Glu Glu
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Asn Arg Thr Leu Trp Trp Lys Lys Leu Leu Pro Glu Leu Cys Gln Arg
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Ile Lys Cys Gly Gly Glu Lys Tyr Gln Leu Tyr Leu Ser Ser Leu Lys
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Ala
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Gly Gly Arg Met Val Thr Tyr Glu His Leu Arg Glu Val Val Phe Gly
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Lys Ser Glu Asp Glu His Tyr Pro Leu Trp Lys Ser Val Ile Gly Gly
Met Met Ala Gly Val Ile Gly Gln Phe Leu Ala Asn Pro Thr Asp Leu
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Val Lys Val Gln Met Gln Met Glu Gly Lys Arg Lys Leu Glu Gly Lys
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Glu Gly Gly Ile Arg Gly Leu Trp Ala Gly Trp Val
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780
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Ala Cys Ile Lys Ser Phe Ser Asp Glu Gln Trp Tyr Ser Phe Asn Asp
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Gln His Val Ser Arg Ile Thr Gln Glu Asp Ile Lys Lys Thr His Gly
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Gly Ser Ser Gly Ser Arg Gly Tyr Tyr Ser Ser Ala Phe Ala Ser Ser
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Thr Asn Ala Tyr Met Leu Ile Tyr Arg Leu Lys Asp Pro Ala Arg Asn
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Ala Lys Phe Leu Glu Val Asp Glu Tyr Pro Glu His Ile Lys Asn Leu
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Val Gln Lys Glu Arg Glu Leu Glu Glu Gln Glu Lys Arg Gln Arg Glu
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Ile Glu Arg Asn Thr Cys Lys Ile Lys Leu Phe Cys Leu His Pro Thr
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Lys Gln Val Met Met Glu Asn Lys Leu Glu Val His Lys Asp Lys Thr
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Leu Lys Glu Ala Val Glu Met Ala Tyr Lys Met Met Asp Leu Glu Glu
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Val Ile Pro Leu Asp Cys Cys Arg Leu Val Lys Tyr Asp Glu Phe His
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Asp Tyr Leu Glu Arg Ser Tyr Glu Gly Glu Glu Asp Thr Pro Met Gly
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                                               205
Leu Leu Cly Gly Val Lys Ser Thr Tyr Met Phe Asp Leu Leu Leu
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                                           220
Glu Thr Arg Lys Pro Asp Gln Val Phe Gln Ser Tyr Lys Pro Gly Gly
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Asn Gln Arg Pro Arg Val Tyr Ser Cys His
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                          40
                                              45
Glu Arg Gln Thr Gly Arg Glu His Ala Val Ala Ile Ser Leu Ser His
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Thr Ser Cys Lys Ser Gln Ser Cys Gly Asp Asp Ser His Ser Ser Ser
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                                      75
90
Asn Ser Gly Asp Trp Asp Pro Ser Ser Phe Leu Ser Ala His Lys Leu
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Ser Gly Leu Trp Asn Ser Pro His Ser Ser Gly Ala Met Pro Gly Ser
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<210> 3679
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Tyr Pro Pro Pro Arg Leu Arg Gln Leu Leu Pro Met Leu Leu Gln Gly
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Thr Ser Ile Phe Thr Ala Pro Lys Glu Ile Ala Glu Ile Lys Ala Gln
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Leu Glu Thr Ala Leu Lys Trp Arg Asn Tyr Glu Val Lys Leu Arg Leu
                        55
Leu Leu His Leu Glu Glu Leu Gln Met Glu His Asp Ile Arg His Tyr
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                                        75
Asp Leu Glu Ser Val Pro Met Thr Trp Asp Pro Val Asp Gln Asn Pro
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Arg Leu Leu Thr Leu Glu Val Pro Gly Val Thr Glu Ser Arg Pro Ser
Val Leu Arg Gly Asp His Leu Phe Ala Leu Leu Ser Ser Glu Thr His
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                                                125
Gln Glu Asp Pro Ile Thr Tyr Lys Gly Phe Val His Lys Val Glu Leu
                        135
                                            140
Asp Arg Val Lys Leu Ser Phe Ser Met Ser Leu Leu Ser Arg Phe Val
                    150
                                     · 155
Asp Gly Leu Thr Phe Lys Val Asn Phe Thr Phe Asn Arg Gln Pro Leu
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Lys Ala Val Pro Val Thr Ser Phe Thr Tyr Ile Asn Glu Asp Phe Arg

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Gln Arg Ala His Asn Ala His Leu Arg Gly Pro Pro Pro Lys Leu Ile
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Pro Val Ser Gly Lys Leu Glu Lys Asn Ile Glu Lys Ile Leu Ile Arg
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Pro Thr Ala Phe Lys Pro Val Leu Pro Lys Pro Arg Gly Ala Pro Ser
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Leu Pro Ser Phe Met Gly Pro Arg Ala Thr Gly Leu Ser Gly Ser Gln
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Gly Ser Leu Thr Gln Leu Phe Gly Gly
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Arg Glu Glu Val Gln Glu Asn Cys Val Arg Trp Arg Lys Arg Phe Thr
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Phe Val Cys Lys Met Ser Ala Asn Pro Ala Thr Gly Leu Leu Asp Pro
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Cys Val Phe Arg Val Ser Val Arg Lys Glu Leu Lys Gly Gly Lys Ala
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Tyr Ser Lys Leu Gly Phe Ala Asp Leu Asn Leu Ala Glu Phe Ala Gly
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Ser Gly Ser Thr Val Arg Cys Cys Leu Leu Glu Gly Tyr Asp Thr Lys
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Asn Thr Arg Gln Asp Asn Ser Ile Leu Lys Val Thr Ile Gly Met Phe
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                                           140
Leu Leu Ser Gly Asp Pro Cys Phe Lys Thr Pro Pro Ser Thr Ala Lys
                                       155
                   150
Ser Ile Ser Ile Pro Gly Gln Asp Ser Ser Leu Gln Leu Thr Cys Lys
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Gly Gly Gly Thr Ser Ser Gly Gly Ser Ser Thr Asn Ser Leu Thr Gly
                               185
Ser Arg Pro Pro Lys Ala Arg Pro Thr Ile Leu Ser Ser Gly Leu Pro
                           200
                                               205
Glu Glu Pro Asp Gln Asn Leu Ser Ser Pro Glu Glu Val Phe His Ser
                        215
Gly His Ser Arg Asn Ser Ser Tyr Ala Ser Gln Gln Ser Lys Ile Ser
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Gly Tyr Ser Thr Glu His Ser His Ser Ser Ser Leu Ser Asp Leu Thr
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His Arg Arg Asn Thr Ser Thr Ser Ser Ser Ala Ser Gly Gly Leu Gly
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Met Thr Val Glu Gly Pro Glu Gly Ser Glu Arg Glu His Arg Pro Pro
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Glu Lys Pro Pro Arg Pro Pro Arg Pro Leu His Leu Ser Asp Arg Ser
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                                            300
Phe Arg Arg Lys Lys Asp Ser Val Glu Ser His Pro Thr Trp Val Asp
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                    310
Asp Thr Arg Ile Asp Ala Asp Ala Ile Val Glu Lys Ile Val Gln Ser
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335 325 330 Gln Asp Phe Thr Asp Gly Ser Asn Thr Glu Asp Ser Asn Leu Arg Leu 345 Phe Val Ser Arg Asp Gly Ser Ala Thr Leu Ser Gly Ile Gln Leu Ala 360 Thr Arg Val Ser Ser Gly Val Tyr Glu Pro Val Val Ile Glu Ser His 370 375 380 <210> 3685 <211> 1293 <212> DNA <213> Homo sapiens <400> 3685 tocatgoago gatoccottg gooagaagaa gqtocattca ttoagttggg gggttcatot cagacaacct cccgtcatca ccccttgagt gagacctaag ccttcaccgc agccttcgag gtgccgtggt ctggtgggcc ccctcctgct cctctgtggc tctccccgcc gccattctga tactggcgtc cccaatctcc ttgagaaacc attttctcta ctctgatgtc ttttcagaag tracatectg ttetggggat gracectge tecterage cracecaaac tgacttaaca cceaccacce ttcccaggtc agcccaaatg ccacttcccc caggaagctc tccctgatgc tgccctggat ggaatgagtc agacctgctg ttgtggggcc ctggccgcgc ctagatacac 420 ttctagggtc tatactcgag tatccaggtg atctagggtc tatactcgag tatccaggtg 480 accacactge tgaagttgge tteteetgat caggeateaa etetgggaet gegtttgeeg 540 attetgttee etaaegeage egeaggggee ageaegetge etggeaegte atggggggete ctccatgttg ggtggatatg cgaacggctt cctgagaaag tgcaggatgt aaaggaacgc qqaqqqtgqc ggcgqcgtqq agggcagagg caaggcacac ggcgaggact gcgttgggcc ggcctgtggt ctgtttcaca gcagacaggg aatagcagca gcctgcagtg tgctccagaa gacagtgggg aaggggcetg getgacatet egecaceegg teageetgta teeteettee cccatctttc tgtgatcata aaggatccct tgagccactt gattttcaca ctgtcaatga cctagagtca ccaaacacct ctcaacaagc cgtggtctcc acttgacatc tggaacaacg ctcctcgggt ctgggaggac cacgcgtcga aagggaagag cagaggacgc tggctctcat ggcaggatgg tgtgtgtacg ggacgcgtct ttcgggagga tgacggcggc cttggagagc cccagaatgt cacaagcgtc catgaattcc ttcagactct ggaagctcga aacattctgc ctatctgagg ttgagatcag gatcacatca gagactccag ctctggccat tttagggtct 1200

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Pro Val Cys Cys Glu Thr Asp His Arg Pro Ala Gln Arg Ser Pro Arg
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Arg Val Pro Cys Leu Cys Pro Pro Arg Arg Arg His Pro Pro Arg Ser
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Phe Thr Ser Cys Thr Phe Ser Gly Ser Arg Ser His Ile His Pro Thr
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Trp Arg Ser Pro His Asp Val Pro Gly Ser Val Leu Ala Pro Ala Ala
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Xaa Leu His Val Ser Ala Ala Pro His
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ceteteatee agtgtgacta ttgccctete etgttteaca tggattgeet egageegeeg
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1020
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aaccagaaga atatgacact gagcaatcgg tgccaggtgt ttgatcgttt ccaggacacc
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                                25.
Thr Asp Glu Ala Glu Lys Arg Ser Arg Lys Pro Glu Lys Glu Pro Arg
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Arg Ser Gly Arg Ala Thr Asn His Asp Ser Cys Asp Ser Cys Lys Glu
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Gly Gly Asp Leu Cys Cys Asp His Cys Pro Ala Ala Phe His Leu
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                                        75.
Gln Cys Cys Asn Pro Pro Leu Ser Glu Glu Met Leu Pro Pro Gly Glu
                                    90
Trp Met Cys His Arg Cys Thr Val Arg Arg Lys Lys Arg Glu Gln Lys
                                105
Lys Glu Leu Gly His Val Asn Gly Leu Val Asp Lys Ser Gly Lys Arg
                            120
Thr Thr Ser Pro Ser Ser Asp Thr Asp Leu Leu Asp Arq Ser Ala Ser
                                            140
Lys Thr Glu Leu Lys Ala Ile Ala His Ala Arg Ile Leu Glu Arg Arg
                    150
                                        155
Ala Ser Arg Pro Gly Thr Pro Thr Ser Ser Ala Ser Thr Glu Thr Pro
                165
                                    170
Thr Ser Glu Gln Asn Asp Val Asp Glu Asp Ile Ile Asp Val Asp Glu
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                                185
                                                    190
Glu Pro Val Ala Ala Glu Pro Asp Tyr Val Gln Pro Gln Leu Arg Arg
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Pro Phe Glu Leu Leu Ile Ala Ala Ala Met Glu Arg Asn Pro Thr Gln
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Phe Gln Leu Pro Asn Glu Leu Thr Cys Thr Thr Ala Leu Pro Gly Ser

215

· 210

300

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Ser Lys Arg Arg Lys Glu Glu Thr Thr Gly Lys Asn Val Lys Lys
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Thr Gln His Glu Leu Asp His Asn Gly Leu Val Pro Leu Pro Val Lys
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                                265
Val Cys Phe Thr Cys Asn Arg Ser Cys Arg Val Ala Pro Leu Ile Gln
                           280
                                                285
Cys Asp Tyr Cys Pro Leu Leu Phe His Met Asp Cys Leu Glu Pro Pro
                       295
                                            300
Leu Thr Ala Met Pro Leu Gly Arg Trp Met Cys Pro Asn His Ile Glu
                    310
                                        315
His Val Val Leu Asn Gln Lys Asn Met Thr Leu Ser Asn Arg Cys Gln
                                    330
                325
Val Phe Asp Arg Phe Gln Asp Thr Val Ser Gln His Val Val Lys Val
           340
                                345
Asp Phe Leu Asn Arg Ile His Lys Lys His Pro Pro Asn Arg Arg Val
                            360
Leu Gln Ser Val Lys Arg Arg Ser Leu Lys Val Pro Asp Ala Ile Lys
                        375
                                            380
Ser Gln Tyr Gln Phe Pro Pro Pro Leu Ile Ala Pro Ala Ala Ile Arg
                                        395
                    390
Asp Gly Glu Leu Ile Cys Asn Gly Ile Pro Glu Glu Ser Gln Met His
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                                    410
Leu Leu Asn Ser Glu His Leu Ala Thr Gln Ala Glu Gln Gln Glu Trp
                                425
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Leu Cys Ser Val Val Ala Leu Gln Cys Ser Ile Leu Lys His Leu Ser
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                                                445
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Ala Lys Gln Met Pro Ser His Trp Asp Ser Glu Gln Thr Glu Lys Ala
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                                            460
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Asp Ile Lys Pro Val Ile Val Thr Asp Ser Ser Val Thr Thr Ser Leu
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Gln Thr Ala Asp Lys Thr Pro Thr Pro Ser His Tyr Pro Leu Ser Cys
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cagcetttet aegtettaag geagagaata geeaggataa ggtgeeaget caaagetgtg
tgccaaccac gatgcaaaca tggtgaatgt atcgggccaa acaagtgcaa gtgtcatcct
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gaagacacct ctatcactcc caaattaaaa atattcttat ctcaaactac tttccatggc tatttttcca aaatatgtga gctgccattt tgctgataaa taaaaatata ttaatgat <210> 3692 <211> 94 <212> PRT <213> Homo sapiens <400> 3692 Xaa Ala Ala Glu Phe Asp Gly Arg Trp Pro Arg Gln Ile Val Ser Ser 10 Ile Gly Leu Cys Arg Tyr Gly Gly Arg Ile Asp Cys Cys Trp Gly Trp 25 Ala Arg Gln Ser Trp Gly Gln Cys Gln Pro Phe Tyr Val Leu Arg Gln 45 35 Arg Ile Ala Arg Ile Arg Cys Gln Leu Lys Ala Val Cys Gln Pro Arg 55 Cys Lys His Gly Glu Cys Ile Gly Pro Asn Lys Cys Lys Cys His Pro 70 Gly Tyr Ala Gly Lys Thr Cys Asn Gln Gly Arg Lys Thr Val 90 85 <210> 3693 <211> 2641 <212> DNA <213> Homo sapiens <400> 3693 cggccgcgtc gacgggaaag agccgctaga gcagaccgcg ccgccgccgg agccgcgcct 60 gcccaggccc ggggagggag gaggcgggcg tcagggtgct gcgccccgct cggcgtccga getteeggee gggetgtgee eegegeggte ttegeeggga tgaagegeee etgegaggag acgacetecg agagegacat ggacgagace ategacgtgg ggagegagaa caattacteg gggcaaagta ctagctctgt gattagattg aattctccaa caacaacatc tcagattatg gcaagaaaga aaaggagagg gattatagag aaaaggcgtc gggatcggat aaataacagt ttatctgagt tgagaagact tgtgccaact gcttttgaaa aacaaggatc tgcaaagtta gaaaaagctg aaatattgca aatgacagtg gatcatttga agatgcttca ggcaacaggg ggtaaagget actttgacge acacgetett gecatggaet teatgageat aggatteega gagtgcctaa cagaagttgc gcggtacctg agctccgtgg aaggcctgga ctcctcggat ccgctgcggg tgcggcttgt gtctcatctc agcacttgcg ccacccagcg ggaggcggcg gccatgacat cetecatgge ceaceaenea teateegete caceegeate actgggeege 720

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acggccacgt 900	ttgcccatgc	ggattcagcc	ctccgaatgc	catccacggg	cagcgtcgcc
ccctgcgtgc 960	cacctctctc	cacctctctc	ttgtccctct	ctgccaccgt	ccacgccgca
1020	ccaccgcggc		_		
atgcttcccc 1080	caaacgcagc	agcagcagtg	gccgcggcca	cagccatcag	cccgcccttg
1140	ccacgtccag			•	
1200	ggacagaagt				_
1260	ctccatttca		_		_
1320	agatccacaa				
1380	attetettt		•		
1440	gcaacttttg				
1500	cgtaccatcc		-		
1560	taagtgcctg				
1620		,	_		_
1680	gtgtggagga				
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1800	acagacatgc			•	•
1860	tctcagatta				
1920	ggctcaaaat				
1980	gttgcctacc				
2040	tttgtaggag				•
2100			_		
2160	ttctcatttt			•	
2220	ttctggaggt				
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Ala Val Phe Ala Gly Met Lys Arg Pro Cys Glu Glu Thr Thr Ser Glu
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Ser Asp Met Asp Glu Thr Ile Asp Val Gly Ser Glu Asn Asn Tyr Ser
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Gly Gln Ser Thr Ser Ser Val Ile Arg Leu Asn Ser Pro Thr Thr
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Ser Gln Ile Met Ala Arg Lys Lys Arg Arg Gly Ile Ile Glu Lys Arg
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Arg Arg Asp Arg Ile Asn Asn Ser Leu Ser Glu Leu Arg Arg Leu Val
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Pro Thr Ala Phe Glu Lys Gln Gly Ser Ala Lys Leu Glu Lys Ala Glu
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Ile Leu Gln Met Thr Val Asp His Leu Lys Met Leu Gln Ala Thr Gly
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                                        155
Gly Lys Gly Tyr Phe Asp Ala His Ala Leu Ala Met Asp Phe Met Ser
                165
                                    170
Ile Gly Phe Arg Glu Cys Leu Thr Glu Val Ala Arg Tyr Leu Ser Ser
                                185
Val Glu Gly Leu Asp Ser Ser Asp Pro Leu Arg Val Arg Leu Val Ser
                            200
                                                205
His Leu Ser Thr Cys Ala Thr Gln Arg Glu Ala Ala Met Thr Ser
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Ser Met Ala His His Xaa Ser Ser Ala Pro Pro Ala Ser Leu Gly Arg
                    230
                                        235
Arg Leu Pro Pro Pro Ala Arg Ser Pro Ala Pro Ala Gln Arg Pro Pro
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Cys Leu Arg Val Asn Pro Leu Ser Pro Leu His Asn Phe Arg Ser Ala
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Ser Ala His Gly Ser Ala Leu Leu Thr Ala Thr Phe Ala His Ala Asp
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Ser Ala Leu Arg Met Pro Ser Thr Gly Ser Val Ala Pro Cys Val Pro
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Pro Leu Ser Thr Ser Leu Leu Ser Leu Ser Ala Thr Val His Ala Ala
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Ala Ala Ala Thr Ala Ala Ala His Ser Phe Pro Leu Ser Phe Ala
                325
                                    330
Gly Ala Phe Pro Met Leu Pro Pro Asn Ala Ala Ala Ala Val Ala Ala
                                                    350
            340
                                345
Ala Thr Ala Ile Ser Pro Pro Leu Ser Val Ser Ala Thr Ser Ser Pro
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                            360
Gln Gln Thr Ser Ser Gly Thr Asn Asn Lys Pro Tyr Arg Pro Trp Gly
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Tyr Phe Ala Glu Tyr Trp Tyr Gln Ala Gln Cys Cys Gln Tyr Asp Tyr
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Cys Asn Ser Trp Ser Ser Pro Gln Leu Gln Ser Ser Leu Pro Glu Pro
                        55
                                            60
His Asp Arg Pro Leu Ala Leu Pro Leu Ser Asp Ser Gln Ile Gln Trp
                    70
                                        75
Phe Tyr Gln Ala Leu Asn Leu Ser Leu Pro Leu Pro Asn Phe His Ala
                                    90
Gly Thr Glu Pro Asp Gly Leu Asp Pro Met Val Thr Leu Ser Leu Asn
                                105
Leu Gly Leu Ser Phe Ala Glu Leu Arg Arg Met Tyr Leu Phe Leu Asn
                            120
Ser Ser Gly Leu Leu Val Leu Pro Gln Ala Gly Leu Leu Thr Pro His
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Pro Ser
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caqcetqtgt gecaaceacg atgeaaacat ggtgagtgta tegggecaaa caagtgeaag
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aacqqatata tgctcatgcc ggatggttcc tgctcaagtg ccctgacctg ctccatggca
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Ala Arg Gln Ser Trp Gly Gln Cys Gln Pro Val Cys Gln Pro Arg Cys
                            40
Lys His Gly Glu Cys Ile Gly Pro Asn Lys Cys Lys Cys His Pro Gly
                        55
Tyr Ala Gly Lys Thr Cys Asn Gln Asp Leu Asn Glu Cys Gly Leu Lys
                    70
                                         75
Pro Arg Pro Cys Lys His Arg Cys Met Asn Thr Tyr Gly Ser Tyr Lys
                                    90
Cys Tyr Cys Leu Asn Gly Tyr Met Leu Met Pro Asp Gly Ser Cys Ser
            100
Ser Ala Leu Thr Cys Ser Met Ala Asn Cys Gln Tyr Gly Cys Asp Val
                            120
                                                 125
Val Lys Gly Gln Ile Arg Cys Gln Cys Pro Ser Pro Gly Leu Gln Leu
                        135
Ala Pro Asp Gly Arg Thr Cys Val Asp Val Asp Glu Cys Ala Thr Gly
                    150
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Arg Ala Ser Cys Pro Lys Phe Arg Gln Cys Val Asn Thr Phe Gly Ser
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Tyr Ile Cys Lys Cys His Lys
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Gly His Cys Leu Phe Tyr Tyr Lys Asp Ser Arg Glu Glu Ser Val Leu
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His Ile Cys Thr Cys Val Cys Met Cys Val Arg Lys Cys Val Pro Arg
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Gln His Ile Cys Met Cys Ala Cys Val Cys Ile Arg Thr Ala Ile Cys
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Thr Cys Val His Val Gln Thr Ala Tyr Leu Cys Thr Cys Val Cys Pro
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Glu Leu Leu Ser Leu Pro Ala Ala Ser Leu Ala Asp Gln Asp Ile Phe
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Asn Ala Val Ile Lys Glu His Pro Gly Leu Val Gln Arg Leu Pro Cys
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Val Trp Asn Val Gln Leu Ser Asp His Thr Leu Ala Glu Arg Cys Tyr
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Ser Glu Ala Ser Asp Leu Lys Val Ile His Trp Asn Ser Pro Lys Lys
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Leu Arg Val Lys Asn Lys His Val Glu Phe Phe Arg Asn Phe Tyr Leu
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Thr Phe Leu Glu Tyr Asp Gly Asn Leu Leu Arg Arg Glu Leu Phe Val
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Cys Pro Ser Gln Pro Pro Pro Gly Ala Glu Gln Leu Gln Gln Ala Leu
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Ala Gln Leu Asp Glu Glu Asp Pro Cys Phe Glu Phe Arg Gln Gln Gln
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Leu Thr Val His Arg Val His Val Thr Phe Leu Pro His Glu Pro Pro
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 Pro Pro Arg Pro His Asp Val Thr Leu Val Ala Gln Leu Ser Met Asp
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Ser Glu Asn Glu Thr Ser Asp Arg Glu Asp Gly Pro Pro Lys Gly His
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His Val Thr Asp Ser Glu Asn Asp Glu Pro Leu Asn Leu Asn Ala Ser
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Asp Ser Glu Ser Glu Glu Leu His Arg Gln Lys Asp Ser Asp Ser Glu
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Val Asn Gln His Gly Ser Asp Ser Glu Ser Glu Glu Thr Arg Lys Leu
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 Pro Gly Ser Asp Ser Glu Asn Glu Glu Leu Leu Asn Gly His Ala Ser
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Glu Ser Glu Glu Pro Pro Arg His Gln Ala Ser Asp Ser Glu Asn Glu
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Arg His Gln Ala Ser Asp Ser Glu Asn Glu Glu Leu Pro Lys Pro Arg
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Ser Arg His Lys Gln Lys Pro Glu Ser Asp Asp Ser Asp Arg Glu
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Glu Asp Glu Glu Lys Ala Ser Ala Lys Lys Ser Arg Val Val Ser Asp
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Ala Asp Asp Ser Asp Ser Asp Ala Val Ser Asp Lys Ser Gly Lys Arg
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Glu Lys Thr Ile Ala Ser Asp Ser Glu Glu Glu Ala Gly Lys Glu Leu
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Ser Asp Lys Lys Asn Glu Glu Lys Asp Leu Phe Gly Ser Asp Ser Glu
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 Lys Ala His Lys Arg Tyr Leu Leu Met Ser Ile Asp Gln Arg Lys Lys
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Cys Leu Glu Arg Glu Glu Tyr Leu Leu Phe Asp Ser Asp Lys Leu Ser
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His Leu Ile Leu Asp Ser Ser Ser Lys Ile Cys Asp Leu Asn Ala Asn
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Thr Glu Ser Glu Val Pro Gly Gly Gln Ser Val Gly Val Gln Gly Glu
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Ala Ala Cys Val Ser Ile Pro His Leu Asp Leu Lys Asn Val Ser Asp
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Gly Asp Lys Trp Glu Glu Pro Phe Pro Ala Phe Lys Ser Trp Gln Glu
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Asp Ser Glu Ser Gly Glu Ala Gln Leu Ser Pro Gln Ala Gly Arg Met
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Ser Phe Ser Ser Lys Asp Glu Lys Arg Glu Asp Arg Thr Pro Tyr Gln
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Leu Val Lys Lys Leu Gln Lys Lys Ile Arg Gln Phe Glu Glu Gln Phe
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Glu Arg Glu Arg Asn Ser Lys Pro Ser Tyr Ser Asp Ile Ala Ala Asn
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Pro Lys Val Leu Lys Trp Met Thr Glu Leu Thr Lys Leu Arg Lys Gln
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Ile Lys Asp Ala Lys His Lys Asn Ser Asp Gly Glu Phe Val Pro Gln
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Thr Arg Pro Arg Ser Asn Thr Leu Pro Lys Ser Phe Gly Ser Ser Leu
Asp His Glu Asp Glu Glu Asn Glu Asp Glu Pro Lys Val Ile Gln Lys
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Glu Lys Lys Pro Ser Lys Glu Ala Thr Leu Glu Leu Ile Leu Lys Arg
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Met Thr Lys Asp His Leu Val Glu Glu Lys Ala Ser Leu Gln Lys Ser
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Leu Leu Tyr Tyr Glu Ser Gln His Gly Arg Pro Val Thr Lys Glu Glu
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Val Cys Phe Asp Asp Phe Phe Pro Ile Ser Gln Val Arg Leu Trp Ala
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Leu Gln Leu Ile Met Val Ser Thr Pro Ser Leu Leu Val Val Leu His
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Val Ala Tyr His Glu Gly Arg Glu Lys Arg His Arg Lys Lys Leu Tyr
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Gln Lys Ile Ser Lys Gln Gln Leu Gln Thr Val Lys Asp Arg Phe Gln
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Asn Ala Val Gln Ser Tyr Tyr Glu Val Phe Leu Lys Ser Asp Arg Val
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Val Phe Lys Lys His Ile Glu Lys Arg Val Arg Ser Leu Pro Glu Ile
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Asp Ala Ile Tyr Arg Gly Glu Glu Asp Pro Arg Lys Gln Gln Ala Arg
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Gln	Ile	Arq	Arg	Glu	Leu	Asp	Gly	Arq	Leu	Gln	Met	Ala	Asp	Gln	Ile
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Ala	Arq	Glu	Arq	Lys	Phe	Pro	Lys	Phe	Val	Ser	Lys	Glu	Met	Glu	Asn
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Leu	Glu	Ser	Met	Pro	Val	Ser	Lvs	Glv		Glu	Phe	Lvs	Leu		Lvs
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Leu	Lvs	Ara		His	Asn	Ala	Ser		Ile	Asp	Met	Glv	Glu	Glu	Ser
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110	vai	- 7 -	Cys	325	1100		V 44 4	Oru	330	OL y	014	_,_	a	335	
Acn	Gln	αla	Glu	Ala	Ser	Lve	Pro	Thr		Glv	Thr	Gln	Glv		Phe
rap	GIM	AIG	340	AIG	JCI	Lys	110	345	пр	GLY	1111	OIII	350	пор	* ***
Sar	Thr	Thr		Ala	T.A11	Pro	2 L Z		Larg	Va l	Tare	T.e.11		Thr	Glu
361	1111	355	1113	AIG	Deu	110	360	Val	Llys	Val	Lys	365	1110	1111	GIU
Sar	Thr		Va I	Leu	λl =	Lau		Acn	Lare	Glu	Len		Aria	Wa 1	Tle
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Lan		Dro	Thr	Pro	Δen		Dro	Lve	Gln	Sar		Trn	Hie	Lve	Met
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	37-3	Ca+	Tvc	Asn		Dro	N c m	cin	700		Tarc	T1_	Lvc	Len	
1111	vai	261	цуз	405	Cys	FIO	ASIL	GIII	410	nea	пуз	116	шyз	415	nia
1701	) × ~	Mo+	7.55	Lys	Dro	Cl n	7	Mot		uic	C02	Clv	There		Trn
val	Arg	Mec	420	гуs	PIU	GIII	ASII	425	пур	nis	361	Gry	430	Deu	ıιρ
הות	τ1.	C1		7.55	val	Two	Tara		Tres	T	Lvc	720		Dho	Val
AIG	TTC	435	цуз	Asn	vai	ırp	440	Arg	пр	цуз	цуз	445	FIIC	FIIC	Val
T 011	17-1		Va l	Ser	Gln.	The same		Dho	λl ¬	Mot	Cvc		Tur-	7 ~~	Glu
rea	450	GIII	Val.	361	GIII	455	1111	FIIC	ALA	MEC	460	261	TYL	Arg	GIU
Tuc		7 l -	Cl.	Pro	C15		Lou	T 011	Gl n	T 011		Cly	Tra exe	The	นาไ
465	ьys	MIA	Giu	PIQ	470	GIU	пеп	Leu	GIII	475	ASP	Gry	ıyı	1111	480
	Т	Th.	N cm	Pro		Dro	C111	T 011	C1.,		C111	7 ~~	7 T a	Dho	
ASP	TYL	1111	мэр	485	GIII	FIO	GIY	Deu	490	GIY	GLY	ALG	Ala	495	FILE
700	71-	17-1	Tarc	Glu	C111	7.55	The	17-1		Dho	737	Co.~	N c ro		Gl ii
ASII	AIA	Val	500	GIU	GIY	ASP	IIIL	505	TIE	Pne	Ala	ser	510	Asp	Gru
<b>~1</b> ~	3	N		T	·	17- 1	<b>61</b> -		16	TT	N	71		<b>C1</b>	C1 ~
GIII	Asp	_	ire	Leu	Пр	val		Ala	Met	Tyr	Arg		Int	GIY	GIII
C	***	515	D	**- 7	D	<b>D</b>	520	<b>61</b> -	17- 1	<b>~</b> 1	*	525	3	31-	T
Ser		гåг	Pro	Val	Pro		Thr	GIN	val	GIN		Leu	ASI	ALA	гÃг
~1	530	-		_	~ 3	535	_		_	_,	540	-1.	-1		~1
	GIY	Asn	vaı	Pro		Leu	Asp	Ala	Pro		ser	GIN	Pne	Ser	
545	_	_		_	550			_		555		_			560
Leu	rys	Asp	Ala	Asp	Arg	Ala	Gin	ьуs		GIY	met	Asp	GIU		тте
_	_	_	_	565	_	_,	_		570	_	_	-1		575	
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His	Tyr	Ser	Phe	Ala	Phe	Cys	Ala	Ser	His	Val	His	Gly		Arg	Pro
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Asp	Gly	Ile	Gly	Thr	Val	Thr		Glu	Glu	Lys	Glu		Phe	Glu	Glu
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Ile	_	Glu	Arg	Leu	Arg		Leu	Leu	Glu	Asn		IIe	Tnr	His	Pne
	690	_		_	_,	695			<b>~</b> 3	<b>63</b>	700	T	T 1.00	ח ד ח	Th~
_	Tyr	Cys	Phe	Pro		GIA	Arg	Pro	GIU		АТА	ьeu	гур	Ala	720
705		•	T	G1	710	T/a l	T 011	Mor	Tvc	715	Tla	t/a l	Thr	Pro	
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Dwo	G1 n	C1.,	C1		Tvc	Thr	Wa 1	Tla		Lve	Cve	T.eu	Glu	Gln	Ala
PIO	GIII	Giu	740	Vai	пуз	1	var	745		2,0	0,0		750		
בומ	T.e.ii	Va 1		Tvr	Ser	Ara	Leu		Glu	Tvr	Ala	Lvs		Glu	Glu
AIG	DC.	755		-1-			760			-1-		765			
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Gln	Gln	Asn	Glu	Glu	His	His	Ala	Glu	Pro	His	Val	Asp	Lys	Gly	Glu
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Ala	Phe	Ala	Trp	Trp	Ser	Asp	Leu		Val	Glu	His	Ala		Thr	Phe
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Leu	Ser		Phe	Ala	Val	Asp			Ala	Ala	Leu		Val	Gln	Pro
		835			_		840		-1	<b>61</b>	•	845	7	7	Dho
Pro	_	Thr	Trp	Asp	Ser			Leu	Pne	GIN	ьеи 860	Leu	ASII	Asp	Pne
_	850	ml	D		2	855		200	C111	Tara		uie	Luc	Hic	Leu
	Arg	Thr	ASP	TYL	870	neu	Cys	ASII	GIY	875		mis	цуз	1115	880
865	y e.p.	T.A11	Dhe	λla		T.e.11	Val	Val	Ara			Asp	Leu	Met	
GIII	nsp	DCu		885					890					895	
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Leu	Asp	Ala	Leu	Gln	Thr	Phe	Ile	Arg	Asp	Leu	His	Trp	Pro	Glu	Glu
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Met	Ile	Glu	Ser	. Cys	Val	Lys	Arg	Thr			Ala	Phe	Glu		Lys
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Leu	Gln	Lys			Arg	Ser	Thr			Arg	Val	Pro			Ile
			980		•			985				<b>63</b> .	990		T
Cys	Thr			Asn	Val	Met			Ala	гуѕ	Ala			inr	Lys
_	<b>~</b>	995		C1.	34×4	<b>61.</b>	100		nh-	. או		100		u:-	Gln
Leu			Met	. GIU	met			GIU	Pue	ALD	102		ιιþ	nis	Gln
m	101			T1-	. n	101		т1-	. c1	ر. ای			Lvo	יינט	Met
īÀI	nis	Ser	пÄS	TTE	. Asp	GIU	י דבנו	тте	GIU		11T	val	Ly S		

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Gly Met Asp Val Ala Asp Ala Tyr Val Thr Phe Val Arg His Ser Gln
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                                           1100
Asp Val Leu Arg Asp Lys Val Asn Glu Glu Met Tyr Ile Glu Arg Leu
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                   1110
Phe Asp Gln Trp Tyr Asn Ser Ser Met Asn Val Ile Cys Thr Trp Leu
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Asp Phe Gly Leu Ala Arg Arg Tyr Asn Pro Asn Glu Lys Leu Lys Val
                            40
Asn Phe Gly Thr Pro Glu Phe Leu Ser Pro Glu Val Val Asn Tyr Asp
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Gln Ile Ser Asp Lys Thr Asp Met Trp Ser Met Gly Val Ile Thr Tyr
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                                         75
Met Leu Leu Ser Gly Leu Ser Pro Phe Leu Gly Asp Asp Asp Thr Glu
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                                    90
Thr Leu Asn Asn Val Leu Ser Gly Asn Trp Tyr Phe Asp Glu Glu Thr
            100
                                105
                                                     110
Phe Glu Ala Val Ser Asp Glu Ala Lys Asp Phe Val Ser Asn Leu Ile
                            120
Val Lys Asp Gln Arg Ala Arg Met Asn Ala Ala Gln Cys Leu Ala His
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Pro Trp Leu Asn Asn Leu Ala Glu Lys Ala Lys Arg Cys Asn Arg Arg
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Leu Lys Ser Gln Ile Leu Leu Lys Lys Tyr Leu Met Lys Arg Arg Trp
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Ala Phe Lys Ile Val Pro Tyr Asn Thr Glu Thr Leu Asp Lys Leu Leu
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Thr Glu Ser Leu Lys Asn Asn Ile Pro Ala Ser Gly Leu His Leu Phe
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Gly Ile Asn Gln Leu Glu Glu Glu Asp Met Met Thr Asn Gln Arg Asp
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Glu Glu Leu Pro Thr Leu Leu His Phe Ala Ala Lys Tyr Gly Leu Lys
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His Gly Phe Arg Asp Leu Arg Gln Phe Ile Asp Glu Tyr Val Glu Thr
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Val Asp Met Leu Lys Ser His Ile Lys Glu Glu Leu Met His Gly Glu
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Glu Ala Asp Ala Val Tyr Glu Ser Met Ala His Leu Ser Thr Asp Leu
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Leu Met Lys Cys Ser Leu Asn Pro Gly Cys Asp Glu Asp Leu Tyr Glu
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Ser Met Ala Ala Phe Val Pro Ala Ala Thr Glu Asp Leu Tyr Val Glu
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Met Leu Gln Ala Ser Thr Ser Asn Pro Ile Pro Gly Asp Gly Phe Ser
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Arg Ala Thr Lys Asp Ser Met Ile Arg Lys Phe Leu Glu Gly Asn Ser
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Glu Asp Val Tyr His Thr Val Asp Asp Asp Glu Ala Phe Ser Val Asp
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Leu Ala Ser Arg Pro Pro Val Pro Val Pro Arg Pro Glu Thr Thr Ala
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Thr Gly Cys Pro Pro Leu Gly Leu Glu Ser Leu Arg Val Ser Asp Ser
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Arg Leu Glu Ala Ser Ser Ser Gln Ser Phe Gly Leu Gly Pro His Arg
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65
Gly Arg Leu Asn Ile Gln Ser Gly Leu Glu Asp Gly Asp Leu Tyr Asp
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Asp Ala Gly His Pro Thr Arg Phe Ser Gly Val Ile Thr Gln Gly Arg
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Met Asp Ala Val Phe Pro Ala Asn Ser Asp Pro Glu Thr Pro Val Leu
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Asn Leu Leu Pro Glu Pro Gln Val Ala Arg Phe Ile Arg Leu Leu Pro
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Gln Asn Val Tyr Ser Val Pro Gly Ser Gln Tyr Leu Tyr Asn Gln Pro
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Cys Pro Leu Pro Gln Glu Met Lys Ala Leu Phe Lys Lys Thr Tyr
Asp Glu Lys Lys Thr Tyr Asp Gln Gln Lys Phe Asp Ser Glu Arg Ala
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Asp Gly Thr Ile Ser Ser Glu Ile Lys Ser Ala Arg Gly Ser His His
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Leu Ser Ile Tyr Ala Glu Asn Ser Leu Lys Ser Asp Gly Tyr His Lys
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Arg Thr Asp Arg Lys Ser Arg Ile Ile Ala Lys Asn Val Ser Thr Ser
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Lys Pro Glu Phe Glu Phe Thr Thr Leu Asp Phe Pro Glu Leu Gln Gly
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Ala Glu Asn Asn Met Ser Glu Ile Gln Lys Gln Pro Lys Trp Gly Pro
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Val His Ser Val Ser Thr Asp Ile Ser Leu Leu Arg Glu Val Val Lys
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Pro Ala Ala Val Leu Ser Lys Gly Glu Ile Val Val Lys Asn Asn Pro
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Asn Glu Ser Val Thr Ala Asn Ala Ala Thr Asn Ser Pro Ser Cys Thr
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Arg Glu Leu Ser Trp Thr Pro Met Gly Tyr Val Val Arg Gln Thr Leu
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Ser Thr Glu Leu Ser Ala Ala Pro Lys Asn Val Thr Ser Met Ile Asn
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Leu Lys Thr Ile Ala Ser Ser Ala Asp Pro Lys Asn Val Ser Ile Pro
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Ser Ser Glu Ala Leu Ser Ser Asp Pro Ser Tyr Asn Lys Glu Lys His
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Ile Ile His Pro Thr Gln Lys Ser Lys Ala Ser Gln Gly Ser Asp Leu
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Glu Gln Asn Glu Ala Ser Arg Lys Asn Lys Lys Lys Glu Lys Ser
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Asp Ala Glu Glu Phe Pro Asn Leu Ala Val Ala Ser Glu Arg Arg Asp
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Arg Ile Glu Thr Pro Lys Phe Gln Ser Lys Gln Gln Pro Gln Asp Asn
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Phe Lys Asn Asn Val Lys Lys Ser Gln Leu Pro Val Gln Leu Asp Leu
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Glu Gly Ile Thr Asp Ala Ser Ser Cys Ala Val Leu Leu Pro Ala Ser
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Leu Phe Val Asn Ser His Pro Gly Ile Asp Arg Pro Gly Met Leu Cys
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Gln Ala Asn Asn Cys Phe Ser Thr Gly Leu Ser Arg Arg Val Leu Leu
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Val Leu Ala Gln Gln Phe Ala Leu Met Ala Pro Leu Leu Phe Asn Gly
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Cys Arg Ser Gly Glu Ile Phe Ala Ile Asp Leu Arg Cys Gly Asn Gln
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Gly Lys Gly Trp Lys Ala Thr Arg Leu Phe His Asp Ser Ala Val Thr
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Ser Val Arg Ile Leu Gln Asp Glu Gln Tyr Leu Met Ala Ser Asp Met
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Ala Gly Lys Ile Lys Leu Trp Asp Leu Arg Thr Thr Lys Cys Val Arg
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Gln Tyr Glu Gly His Val Asn Glu Tyr Ala Tyr Leu Pro Leu His Val
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His Glu Glu Glu Gly Ile Leu Val Ala Val Gly Gln Asp Cys Tyr Thr
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                                           220
Arg Ile Trp Ser Leu His Asp Ala Arg Leu Leu Arg Thr Ile Pro Ser
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Pro Tyr Pro Ala Ser Lys Ala Asp Ile Pro Ser Val Ala Phe Ser Ser
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Pro Gly Ala Xaa Pro Cys Leu Pro Arg Arg Gly Trp Cys Val Pro Gly
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Asp Val Arg Ser Ser Pro Pro Leu Pro Gly Trp Cys Ala Leu Ser Asp
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                                        75
Val Arg Ser Arg Gly Arg Ser Cys Pro Ser Ala Pro Lys Ala Ala Gly
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Gly Leu Arg Ala Trp Gly Arg Gly Ser Gly Ala Ala Arg Ala Pro Ala
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            100
Pro Ala Pro Ser Pro Ser Ser Gly Xaa Ser Pro Ser Ser Arg Thr Pro
                            120
Arg Asp Trp Ser Ala Ser Arg Cys Trp Thr Trp Ser Gly Ala Ala Thr
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Ala Pro Thr Pro Phe Ser Pro Ala Gln Gln Pro Pro Ser Ser His Asp
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Gly Leu Ser Leu Asp Pro Ser Gln Leu Glu Pro
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Glu Ile Glu Asp Val Trp His Leu Asp Leu Ser Ser Arg Trp Gln Leu
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Tyr Arg Leu Trp Leu Gln Leu Tyr Gln Ala Asp Thr Pro Pro Gly Lys
Ile Leu Ser Tyr Glu Arg Gln Tyr Arg Thr Ser Ala Glu Arg Met Ala
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Glu Leu Arg Leu Gln Glu Asp Leu His Ile Leu Lys Asp Ala Gln Val
Val Gly Met Thr Thr Gly Ala Ala Lys Tyr Arg Gln Ile Leu Gln
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Phe Leu His Gly Asn Arg Ile Ser His Val Pro Ala Ala Ser Phe Arg
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Ala Cys Arg Asn Leu Thr Ile Leu Trp Leu His Ser Asn Val Leu Ala
Arg Ile Asp Ala Ala Ala Phe Thr Gly Leu Ala Leu Leu Gly Ala Leu
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Asp Leu Ser Asp Asn Ala Gln Leu Arg Ser Val Asp Pro Ala Thr Phe
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His Gly Leu Gly Arg Leu His Thr Leu His Leu Asp Arg Cys Gly Leu
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Gln Glu Leu Gly Pro Gly Leu Phe Arg Gly Leu Ala Ala Leu Gln Tyr
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Leu Tyr Leu Gln Asp Asn Ala Leu Gln Ala Leu Pro Asp Asp Thr Phe
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Arg Asp Leu Gly Asn Leu Thr His Leu Phe Leu His Gly Asn Arg Ile
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Ser Ser Val Pro Glu Arg Ala Phe Arg Gly Leu His Ser Leu Asp Arg
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Leu Leu His Gln Asn Arg Val Ala His Val His Pro His Ala Phe
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Arg Asp Leu Gly Arg Leu Met Thr Leu Tyr Leu Phe Ala Asn Asn Leu
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Ser Ala Leu Pro Thr Glu Ala Leu Ala Pro Leu Arg Ala Leu Gln Tyr
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Leu Arg Leu Asn Asp Asn Pro Trp Val Cys Asp Cys Arg Ala Arg Pro
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Cys Ser Leu Pro Gln Arg Leu Ala Gly Arg Asp Leu Lys Arg Leu Ala
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Ala Asn Asp Leu Gln Gly Cys Ala Val Ala Thr Gly Pro Tyr His Pro
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Ile Trp Thr Gly Arg Ala Thr Asp Glu Glu Pro Leu Gly Leu Pro Lys
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<212> DNA

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Ala Gly Glu Ser Pro Gly His Arg Glu Pro Ser Pro Gly Ser Lys Gln
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Ala Pro Gly Ala Ala Asp Arg Pro Ser Arg Val Pro Lys Ser Pro Ala
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                               105
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cggcagatcg gtgcctcctg aatcccaccc aaaattccca ctgggaatgt gttcctgaaa
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ctgggctgct ttcatcacgc gt
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<212> PRT
<213> Homo sapiens
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Ala Glu Ala Ala Glu Met Asn Pro Val Cys Glu Arg Arg Ala Leu Ser
Pro Ala Arg Ala Cys Ser Pro Arg Gly Trp Gly Leu Trp Ser Phe Gln
                          40
Ser Cys Ser Leu Arg Ile Pro Ser Gln Gly His Phe Ala Leu Gly Ser
Pro Ala Ser Leu Leu Ala Asp Cys Gly Arg Ile Arg Gly Ser Ile Leu
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65
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Tyr Asp Cys Pro Asn Cys Val Gln Phe Phe Leu Ser Phe Glu Tyr Glu
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Val Trp Ser Glu Lys Arg Leu Ser Gln Ala Trp Ala Ala Leu Ser Gly
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Thr His Ser Gln Trp Glu Phe Trp Val Gly Phe Arg Arg His Arg Ser
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Ala Gly Glu Gly Phe Leu Gly Thr Gln Gly
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agtaaaaacg actatgttcc tgtatttgaa tcatcatcca gtacattgac gtttcaaata
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Asn Met Ala Glu Thr His Lys Ala Met Ile Leu Gln Leu Asn Pro Ser
Glu Asn Cys Thr Trp Thr Ile Glu Arg Pro Glu Asn Lys Ser Ile Arg
Ile Ile Phe Ser Tyr Val Gln Leu Asp Pro Asp Gly Ser Cys Glu Ser
Glu Asn Ile Lys Val Phe Asp Gly Thr Ser Ser Asn Gly Pro Leu Leu
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Gly Gln Val Cys Ser Lys Asn Asp Tyr Val Pro Val Phe Glu Ser Ser
            100
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Ser Ser Thr Leu Thr Phe Gln Ile Val Thr Asp Ser Ala Arg Ile Gln
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Ser Pro Gly Arg Ser Leu Val Pro Cys Val Leu Val Leu Gly Thr Thr
                            40
Arg Thr Gln Pro Cys Ser Pro Arg Ser Cys Ser His Ser His Gly Ile
                        55
                                            60
Ala Trp Ser Asp Ala Ala Ser Ala Pro Asp Ala Ser Arg Cys
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                                         75
Gln Ala Cys Gln Ala Lys Pro Arg Phe Ser Gly Ala Ala Gly Gly Gly
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                                     90
Arg His Val Trp Ala Asp
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120
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Glu Glu Leu Gly Glu Ala Ala Ala Phe Arg Val Glu Arg Thr Asp
Tyr Arg Ser Ser His Val Gly Val Arg Ala Thr Arg Cys Gly Pro Leu
Leu Cys Gln Ala Ser Asp Ala Arg Gly Ala Val Gly Cys Gly Gly Arg
Arg Asn Thr Arg Gln Gly Pro Arg Ala Gly Gly Gly Thr Ser Leu Gly
Leu Cys Pro Phe Pro Asn Phe Leu Phe Ser Gln Ser Phe Leu Ser Pro
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Lys Lys Ala Ser Leu Glu Lys Ser Leu Cys Pro Ser Asp Leu Ala Leu
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Ser Pro Ala Phe Leu Val Glu Leu Gly Ser
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geettagage tgegggaaca eegagaeeee eegteettea geetegaeet gggtgeagge
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Arg Pro Glu Asp Val Gly Phe Asp Gly Tyr Ser Met Pro Arg Glu Gly
Ser Thr Ser Lys Gln Met Pro Pro Ser Asp Ala Glu Gly Asp Pro Leu
                        55
Met Asn Met Leu Met Arg Leu Gln Glu Ala Ala Asn Tyr Ser Ser Pro
Gln Ser Tyr Asp Ser Asp Ser Asn Ser Asn Ser His His Asp Asp Ile
Leu Asp Ser Ser Leu Glu Ser Thr Leu
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                                105
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Pro His His Gly Pro Gly Pro Ala Ala Arg Gly Ser Val Ala Pro
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Arg Thr Arg Glu Val Phe Leu Leu Arg Gly Pro Pro Gly Pro Ala Phe
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gcctaggctc cggagatcgg gccatctggg ctctgaaagc aaattagttt tccaactcat
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360
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Ser Ala Thr Glu Ser Leu Pro Thr Leu Glu Leu Leu Ser Gln Val Asp
Met Asp Cys Arg Val His Met Arg Pro Ile Gly Leu Thr Trp Val Leu
Gln Leu Thr Leu Ala Trp Ile Leu Leu Glu Ala Cys Gly Gly Ser Arg
Pro Leu Gln Ala Arg Ser Gln Gln His His Gly Leu Ala Ala Asp Leu
Gly Lys Gly Lys Leu His Leu Ala Gly Pro Cys Cys Pro Ser Glu Met
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90
Asp Thr Thr Glu Thr Ser Gly Pro Gly Asn His Pro Glu Arg Cys Gly
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Val Pro Ser Pro Glu Cys Glu Ser Phe Leu Glu His Leu Gln Arg Ala
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Leu Arg Ser Arg Phe Arg Leu Arg Leu Gly Val Arg Gln Ala Gln
                        135
Pro Leu Cys Glu Glu Leu Cys Gln Ala Trp Phe Ala Asn Cys Glu Asp
                    150
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Asp Ile Thr Cys Gly Pro Thr Trp Leu Pro Leu Ser Glu Lys Arg Gly
                165
                                    170
Cys Glu Pro Ser Cys Leu Thr Tyr Gly Gln Thr Phe Ala Asp Gly Thr
                                185
Asp Leu Cys Arg Ser Ala Leu Gly His Ala Leu Pro Val Ala Ala Pro
                            200
Gly Ala Arg His Cys Phe Asn Ile Ser Ile Ser Ala Val Pro Arg Pro
Arg Pro Gly Arg Arg Gly Arg Glu Ala Pro Ser Arg Arg Ser Arg Ser
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Pro Arg Thr Ser Ile Leu Asp Ala Ala Gly Ser Gly Ser Gly Ser Gly
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Ser Gly Ser Gly Pro
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Thr Leu Ser Pro Ser Gln Gln Pro Leu Pro Thr Glu Leu Asn Val Thr
Ser Pro Ser Lys Glu Glu Cys Gly Pro Cys Thr Asp Thr Ala His Val
Ser Leu Ile Thr Pro Thr Lys Arg Ser Cys Gly Thr Asp Ser Gln Ser
Glu Asn Glu Ala Ser Pro Val Lys Arg Pro Arg Leu Leu Glu Asn Thr
                                105
Glu Arg Ser Glu Glu Thr Ser Arg Ser Lys Gln Lys Ser Arg Arg
Cys Phe Gln Cys Gln Thr Lys Leu Glu Leu Val Gln Gln Glu Leu Gly
                        135
    130
Ser Cys Arg Cys Gly Tyr Val Phe Cys Met Leu His Arg Leu Pro Glu
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Gln His Asp Cys Thr Phe Asp His Met Gly Arg Gly Arg Glu Glu Ala
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<213> Homo sapiens

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<212> DNA

<213> Homo sapiens

<400> 3759

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Cys Leu Ile Gly Ile Val Pro Thr Ser Val Ile Val Thr Gly Val Gln
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Val Ser Ser Arg Ile Phe Met Val Trp Leu Ile Thr His Ser Ile Lys
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Leu Leu Glu Arg Val Glu Glu Pro Val Leu Gln Asn Gln Ile Arg Glu
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His Val Ile Ala Ile Glu Asp Ala Phe Val Asn Ser Gln Glu Trp Thr
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Leu Ser Arg Ser Val Pro Glu Leu Lys Val Gly Ile Val Gly Asn Leu
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Ala Ser Gly Lys Ser Ala Leu Val His Arg Tyr Leu Thr Gly Thr Tyr
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Val Gln Glu Glu Ser Pro Glu Gly Gly Arg Phe Lys Lys Glu Ile Val
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Val Asp Gly Gln Ser Tyr Leu Leu Leu Ile Arg Asp Glu Gly Gly Pro
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Pro Glu Ala Gln Phe Ala Met Trp Val Asp Ala Val Ile Phe Val Phe
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                                           140
Ser Leu Glu Asp Glu Ile Ser Phe Gln Thr Val Tyr His Tyr Tyr Ser
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Arg Met Ala Asn Tyr Arg Asn Thr Ser Glu Ile Pro Leu Val Leu Val
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Gly Thr Gln Asp Ala Ile Ser Ser Ala Asn Pro Arg Val Ile Asp Asp
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Ala Arg Ala Arg Lys Leu Ser Asn Asp Leu Lys Arg Cys Thr Tyr Tyr
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Glu Thr Cys Ala Thr Tyr Gly Leu Asn Val Glu Arg Val Phe Gln Asp
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Val Ala Gln Lys Ile Val Ala Thr Arg Lys Lys Gln Gln Leu Ser Ile
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Gly Pro Cys Lys Ser Leu Pro Asn Ser Pro Ser His Ser Ser Val Cys
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Ser	Gln 290	Lys	Glu	Leu	Arg	Ile 295	Asp	Val	Pro	Pro	Thr 300	Ala	Asn	Thr	Pro
Thr 305	Pro	Val	Arg	Lys	Gln 310	Ser	Lys	Arg	Arg	Ser 315	Asn	Leu	Phe	Thr	Ser 320
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685
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Asp Glu Asp Leu Arg Thr Ala Ile Leu Leu Leu Ala His Gly Ser Arg
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His Leu Ala Cys Arg Lys Gly Asn Val Val Leu Ala Gln Leu Leu Ile
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Trp Tyr Gly Val Asp Val Thr Ala Arg Asp Ala His Gly Asn Thr Ala
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Leu Ala Tyr Ala Arg Gln Ala Ser Ser Gln Glu Cys Ile Asp Val Leu
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Leu Gln Tyr Gly Cys Pro Asp Glu Arg Phe Val Leu Met Ala Thr Pro
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Gln Ala Gln Ala Glu Pro Glu Arg His Val Trp His Arg Arg Glu Ser
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Asp Glu Ser Gly Glu Ser Ala Pro Asp Glu Gly Glu Gly Ala Arg
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Ala Pro Gln Ser Ile Pro Arg Ser Ala Ser Tyr Pro Cys Ala Ala Pro
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Arg Pro Gly Ala Pro Glu Thr Thr Ala Leu His Gly Gly Phe Gln Arg
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Arg Tyr Gly Gly Ile Thr Asp Pro Gly Thr Val Pro Arg Val Pro Ser
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Leu Gly Gln Thr Pro Gly Phe Ser Ser Arg Leu Pro His Leu Pro Ala
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Ser Leu Leu Ser Trp Leu Ser Pro Ser Leu Leu Val Cys Asn Lys Gly
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 Pro Asn Ser Ser Glu Val Leu Tyr Thr Ser Ala Lys Glu Glu Leu Lys
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His	Phe		Asn	Gln	Arq	Glu		Phe	Glu	Gly	Thr	Arg	Glu	Ser	Ile
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Ile Lys Asn Leu Trp Asn Arg Lys Pro Leu Lys Val Tyr Gly Gly Arg
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Pro Val Ile Arg Glu Arg Leu Ser Lys Glu Lys Glu Gly Ser Arg Gly
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Leu Trp Thr Ala Ile Thr Leu Phe Ile Phe Leu Val Cys Cys Gln Ile
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Pro Leu Phe Gly Ile Met Ser Ser Asp Ser Ala Asp Pro Phe Tyr Trp
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Met Arg Val Ile Leu Ala Ser Asn Arg Gly Thr Leu Met Glu Leu Gly
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 Ile Ser Pro Ile Val Thr Ser Gly Leu Ile Met Gln Leu Leu Ala Gly
Ala Lys Ile Ile Glu Val Gly Asp Thr Pro Lys Asp Arg Ala Leu Phe
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 Asn Gly Ala Gln Lys Leu Phe Gly Met Ile Ile Thr Ile Gly Gln Ser
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Ile Val Leu Leu Asp Glu Leu Leu Gln Lys Gly Tyr Gly Leu Gly
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Ser Gly Ile Ser Leu Phe Ile Ala Thr Asn Ile Cys Glu Thr Ile Val
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          180
Trp Lys Ala Phe Ser Pro Thr Thr Ile Asn Thr Gly Arg Gly Thr Glu
                         200 205
Phe Glu Gly Ala Val Ile Ala Leu Phe His Leu Leu Ala Thr Arg Thr
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Asp Lys Val Arg Ala Leu Arg Glu Ala Phe Tyr Arg Gln Asn Leu Pro
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Asn Leu Met Asn Leu Ile Ala Thr Ile Phe Val Phe Ala Val Val Ile
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Arg Gly Gln Tyr Asn Thr Tyr Pro Ile Lys Leu Phe Tyr Thr Ser Asn
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Ile Pro Ile Ile Leu Gln Ser Ala Leu Val Ser Asn Leu Tyr Val Ile
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Ser Gln Met Leu Ser Ala Arg Phe Ser Gly Asn Phe Leu Val Asn Leu
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                                  315
Leu Gly Gln Trp Ser Asp Thr Ser Ser Gly Gly Pro Ala Arg Ala Tyr
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Pro Val Gly Gly Leu Cys Tyr Tyr Leu Ser Pro Pro Glu Ser Phe Gly
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Ser Val Leu Glu Asp Pro Val His Ala Val Val Tyr Ile Val Phe Met
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Leu Gly Ser Cys Ala Phe Phe Ser Lys Thr Trp Ile Glu Val Ser Gly
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Ser Ser Ala Lys Asp Val Ala Lys Gln Leu Lys Glu Gln Gln Met Val
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Met Arg Gly His Arg Glu Thr Ser Met Val His Glu Leu Asn Arg Tyr
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Ile Pro Thr Ala Ala Ala Phe Gly Gly Leu Cys Ile Gly Ala Leu Ser
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Val Leu Ala Asp Phe Leu Gly Ala Ile Gly Ser Gly Thr Gly Ile Leu
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Leu Ala Val Thr Ile Ile Tyr Gln Tyr Phe Glu Ile Phe Val Lys Glu
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Leu His Val Leu Ile Glu Val Phe Ala Pro Pro Gly Glu Ala Tyr Ser
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Arq Met Ser His Ala Leu Glu Glu Ile Lys Lys Phe Leu Val Pro Asp
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Tyr Asn Asp Glu Ile Arg Gln Glu Gln Leu Arg Glu Leu Ser Tyr Leu
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Asp Thr Leu Thr Leu Ser Ala Ala Tyr Thr Lys Asp Leu Leu Leu Pro
Ile Lys Thr Pro Thr Thr Asn Ala Val His Lys Cys Arg Val His Gly
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Leu Glu Ile Glu Gly Arg Asp Cys Gly Glu Ala Ala Ala Gln Trp Ile
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His Met Arg Pro Arg Pro His Gln Ile Ala Asp Leu Phe Arg Pro
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Lys Asp Gln Ile Ala Tyr Ser Asp Thr Ser Pro Phe Leu Ile Leu Ser
                  150 155
Glu Ala Ser Leu Ala Asp Leu Asn Ser Arg Leu Glu Lys Lys Val Lys
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Ala Thr Asn Phe Arg Pro Asn Ile Val Ile Ser Gly Cys Asp Val Tyr
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Ala Glu Asp Ser Trp Asp Glu Leu Leu Ile Gly Asp Val Glu Leu Lys
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Arg Val Met Ala Cys Ser Arg Cys Ile Leu Thr Thr Val Asp Pro Asp
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Thr Gly Val Met Ser Arg Lys Glu Pro Leu Glu Thr Leu Lys Ser Tyr
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Arg Gln Cys Asp Pro Ser Glu Arg Lys Leu Tyr Gly Lys Ser Pro Leu
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Arg Gly Thr Arg Thr Arg Pro Ser Thr Ser Ser Pro Trp Ser Leu Ala
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Pro Tyr Gln Arg Thr Pro Arg Gln Ile Ser Gly Gln Gln Gly His Leu
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Thr Trp Gly Ala Cys Trp Gln His Cys Leu Asp Ser Arg Ala Ser Leu
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Gly Pro Pro Pro Asn Pro Ala Arg Glu Arg Leu Lys Ala Cys Pro Pro
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Leu His Thr Phe Asp Leu Leu Gly Phe Gly Arg Ser Ser Arg Pro Ala
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His Ser Leu Gly Gly Phe Leu Ala Thr Ser Tyr Ser Ile Lys Tyr Pro
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Asp Arg Val Lys His Leu Ile Leu Val Asp Pro Trp Gly Phe Pro Leu
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Arg Pro Thr Asn Pro Ser Glu Ile Arg Ala Pro Pro Ala Trp Val Lys
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Ser Asp Thr Trp Ile Asp Thr Ser Thr Gly Lys Lys Val Lys Met Gln
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PLO	ьeu	515	ASN	GTÀ	Lys	GIN	ьуs 520	WIG	val	Leu	neu	525	Arg	пÀг	GIII
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Val Leu Gly Leu Ser Val Ala Tyr Trp Leu Lys Lys Leu Glu Ser Arg
Arg Gly Ala Ile Arg Val Leu Val Val Glu Arg Asp His Thr Tyr Ser
Gln Ala Ser Thr Gly Leu Ser Val Gly Gly Ile Cys Gln Gln Phe Ser
Leu Pro Glu Asn Ile Gln Leu Ser Leu Phe Ser Ala Ser Phe Leu Arq
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Asn Ile Asn Glu Tyr Leu Ala Val Val Asp Ala Pro Pro Leu Asp Leu
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Arg Phe Asn Pro Ser Gly Tyr Leu Leu Leu Ala Ser Glu Lys Asp Ala
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Ala Ala Met Glu Ser Asn Val Lys Val Gln Arg Gln Glu Gly Ala Lys
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Val Ser Leu Met Ser Pro Asp Gln Leu Arg Asn Lys Phe Pro Trp Ile
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Asn Thr Glu Gly Val Ala Leu Ala Ser Tyr Gly Met Glu Asp Glu Gly
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Arg Ile His Glu Val His Val Lys Met Asp Arg Ser Leu Glu Tyr Gln
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Gln Ile Ala Ala Leu Ala Gly Val Gly Glu Gly Pro Pro Gly Thr Leu
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Gly Gly Arg Ser Pro Thr Glu Gln Glu Glu Pro Asp Pro Ala Asn Leu
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Glu Val Asp His Asp Phe Phe Gln Asp Lys Val Trp Pro His Leu Ala
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Leu Arg Val Pro Ala Phe Glu Thr Leu Lys Cys Phe Val His Pro Gln
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Val Gln Ser Ala Trp Ala Gly Tyr Tyr Asp Tyr Asn Thr Phe Asp Gln
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Asn Gly Val Val Gly Pro His Pro Leu Val Val Asn Met Tyr Phe Ala
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Thr Gly Phe Ser Gly His Gly Leu Gln Gln Ala Pro Gly Ile Gly Arg
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Asp Ile Gly Ser Val Val Asp Glu His Phe Ser Arg Ala Leu Gly Gln
Ala Ile Thr Leu His Pro Glu Ser Ala Ile Ser Lys Ser Lys Met Gly
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Leu Thr Pro Leu Trp Arg Asp Ser Ser Ala Leu Ser Ser Gln Arg Asn
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Ser Phe Pro Thr Ser Phe Trp Thr Ser Ser Tyr Gln Pro Pro Pro Ala
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Pro Cys Leu Gly Gly Val His Pro Asp Phe Gln Val Thr Gly Pro Pro
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Gly Thr Phe Ser Ala Ala Asp Pro Ser Pro Trp Pro Gly His Asn Leu
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His Gln Thr Gly Pro Ala Pro Pro Pro Ala Val Ser Glu Ser Trp Pro
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Tyr Pro Leu Thr Ser Gln Val Ser Pro Ser Tyr Ser His Met His Asp
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Val Tyr Met Arg His His His Pro His Ala His Met His His Arg His
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Arg His His His His His His Pro Pro Ala Gly Ser Ala Leu Asp
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Pro Ser Tyr Gly Pro Leu Leu Met Pro Ser Val His Ala Ala Arg Ile
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Lys Gln Lys Ala Arg Arg Arg Thr Arg Ser Ser Ser Ser Ser Ser
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Gly Ala Arg Glu Arg Gly Gly Arg Gly Arg Gly Ala Gly Gly Gly
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Gly Gly Ala His Gly His Phe Pro Gln Arg Pro Pro Gln Gln Ala Gly
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Gln Arg Ala Ala Ser Arg Ala Gly Cys Gly His Arg Gln Leu Gln Arg
Ala Pro Ala Pro Gly Leu Arg Gln His Pro Cys Gly Ser Gly Thr Glu
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Gly Leu Arg Gly Gly His Leu Ser Glu Thr Val Cys Ala His Ala Glu
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Arg Thr Gln Ala Pro Leu Gln Ser Ala Leu Gly Gln Pro Ala Pro Arg
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Met Asp Asn Val Cys Ile Ile Cys Arg Glu Glu Met Val Thr Gly Ala
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Lys Arg Leu Pro Cys Asn His Ile Phe His Thr Arg Trp Glu Gly Pro
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Trp Gly Ala Cys. Pro Ala Gly Pro Arg Pro Gln Lys Ala Gly Pro Lys
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420
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Asp Asp Pro Pro Pro Ser Thr Leu Leu Lys Asp Tyr Gln Asn Val Pro
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Gly Ile Glu Lys Val Asp Asp Val Val Lys Arg Leu Leu Ser Leu Glu
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Met Ala Asn Lys Lys Glu Met Leu Lys Ile Lys Gln Glu Gln Phe Met
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Lys Lys Ile Val Ala Asn Pro Glu Asp Thr Arg Ser Leu Glu Ala Arg
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Ile Ile Ala Leu Ser Val Lys Ile Arg Ser Tyr Glu Glu His Leu Glu
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Lys His Arg Lys Asp Lys Ala His Lys Arg Tyr Leu Leu Met Ser Ile
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Asp Gln Arg Lys Lys Met Leu Lys Asn Leu Arg Asn Thr Asn Tyr Asp
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Val Phe Glu Lys Ile Cys Trp Gly Leu Gly Ile Glu Tyr Thr Phe Pro
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190

185

180

Pro Leu Tyr Tyr Arg Arg Ala His Arg Arg Phe Val Thr Lys Lys Ala 200 Leu Cys Ile Arg Val Phe Gln Glu Thr Gln Lys Leu Lys Lys Arg Arg Arq Ala Leu Lys Ala Ala Ala Ala Gln Lys Gln Ala Lys Arg Arg 230 Asn Pro Asp Ser Pro Ala Lys Ala Ile Pro Lys Thr Leu Lys Asp Ser 255 245 250 Gln <210> 3851 <211> 1183 <212> DNA <213> Homo sapiens <400> 3851 nnacgcgttt tggcctgagt tggggaggg ggcggggagg gacctgcggc ttgcggcccc geoccettet coggetegea geogacoggt aagecegeet ceteceacgg coggecetgg ggccgtgtcc gccgggcaac tccagccgag gcctgggctt ctgcctgcag gtgtctgcgg cgaggcccct agggtacagc ccgatttggc cccatggtgg gtttcggggc caaccggcgg 240 gctggccgcc tgccctctct cgtgctggtg gtgctgctgg tggtgatcgt cgtcctcgcc 300 ttcaactact ggagcatete etecegeeae gteetgette aggaggaggt ggeegagetg cagggccagg tccagcgcac cgaagtggcc cgcgggcggc tggaaaagcg caattcggac 420 ctcttgctgt tggtggacac gcacaagaaa cagatcgacc agaaggaggc cgactacggc cgcctcagca gccggctgca ggccagagag ggcctcggga agagatgcga ggatgacaag gttaaactac agaacaacat ategtateag atggcagaca tacateattt aaaggagcaa cttgctgagc ttcgtcagga atttcttcga caagaagacc agcttcagga ctataggaag aacaatactt accttgtgaa gaggttagaa tatgaaagtt ttcagtgtgg acagcagatg aaggaattga gagcacagca tgaagaaaat attaaaaagt tagcagacca gtttttagag gaacaaaagc aagagaccca aaagattcaa tcaaatgatg gaaaggaatt ggatataaac aatcaagtag tacctaaaaa tattccaaaa gtagctgaga atgttgcaga taagaatgaa gaaccetcaa gcaatcatat tecacatggg aaagaacaaa teaaaagagg tggtgatgca gggatgcctg gaatagaaga gaatgaccta gcaaaagttg atgatcttcc ccctgcttta aggaageete etattteagt tteteaacat gaaagteate aageaatete eeatetteea 1080

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Val Leu Val Val Leu Leu Val Val Ile Val Val Leu Ala Phe Asn Tyr
          20
                              25
Trp Ser Ile Ser Ser Arg His Val Leu Leu Gln Glu Glu Val Ala Glu
                          40
Leu Gln Gly Gln Val Gln Arg Thr Glu Val Ala Arg Gly Arg Leu Glu
                      55
Lys Arg Asn Ser Asp Leu Leu Leu Leu Val Asp Thr His Lys Lys Gln
Ile Asp Gln Lys Glu Ala Asp Tyr Gly Arg Leu Ser Ser Arg Leu Gln
                                 90
Ala Arg Glu Gly Leu Gly Lys Arg Cys Glu Asp Asp Lys Val Lys Leu
  ~ 100
                              105
Gln Asn Asn Ile Ser Tyr Gln Met Ala Asp Ile His His Leu Lys Glu
                          120
Gln Leu Ala Glu Leu Arg Gln Glu Phe Leu Arg Gln Glu Asp Gln Leu
                      135
                                          140
Gln Asp Tyr Arg Lys Asn Asn Thr Tyr Leu Val Lys Arg Leu Glu Tyr
                   150
                                     155
Glu Ser Phe Gln Cys Gly Gln Gln Met Lys Glu Leu Arg Ala Gln His
               165
                                  170
Glu Glu Asn Ile Lys Lys Leu Ala Asp Gln Phe Leu Glu Glu Gln Lys
                              185
Gln Glu Thr Gln Lys Ile Gln Ser Asn Asp Gly Lys Glu Leu Asp Ile
                          200
Asn Asn Gln Val Val Pro Lys Asn Ile Pro Lys Val Ala Glu Asn Val
                      215
                                          220
Ala Asp Lys Asn Glu Glu Pro Ser Ser Asn His Ile Pro His Gly Lys
                  230
                                     235
Glu Gln Ile Lys Arg Gly Gly Asp Ala Gly Met Pro Gly Ile Glu Glu
                                 250
Asn Asp Leu Ala Lys Val Asp Asp Leu Pro Pro Ala Leu Arg Lys Pro
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Pro Ile Ser Val Ser Gln His Glu Ser His Gln Ala Ile Ser His Leu
                          280
Pro Thr Gly Gln Pro Leu Ser Pro Asn Met Pro Pro Asp Ser His Ile
                      295 300
Asn His Asn Gly Asn Pro Gly Thr Ser Lys Gln Asn Pro Ser Ser Pro
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                                     315
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Leu His Ala .
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cqcaaaqtta ttcccatcat ttcaaaatgt ttggaaggaa tgattcttgc agcaaaatca
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            20
Gln Ile Tyr Lys Gln Leu Gln Glu Met Asp Glu Arg Arg Thr Ile Lys
                            40
                                                 45
Leu Ser Glu Cys Tyr Arg Gly Phe Ala Asp Ser Glu Arg Lys Val Ile
                        55
                                            60
Pro Ile Ile Ser Lys Cys Leu Glu Gly Met Ile Leu Ala Ala Lys Ser
                    70
                                        75
Val Asp Glu Arg Arg Asp Ser Gln Met Val Val Asp Ser Phe Lys Ser
                                    90
Gly Phe Glu Pro Pro Gly Asp Phe Pro Phe Glu Asp Tyr Ser Gln His
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Ile Tyr Arg Thr Ile Ser Asp Gly Thr Ile Ser Ala Ser
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       . 115
                            120
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<211> 1377
<212> DNA
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etgtgeteag eaggetgget ggagaceggg egggttgeet acceeacage ettegeetee
120
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cagaactgtg.gctctggtgt ggttgggata gtggactatg gacctagacc caacaagagt
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gtcagcatgt ttttctacaa tgaccttgtc aatggcaccn accctgcaaa cgagggtggg
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atttccaqqc ctttaaaagc acccctgcc cccgtgacct tgacccacac tggcttggga
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tactttegga taaaccggag aacaatcggc ttccagcatt ttgagtegga agaggacatt
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tetgtgggtg agagatgtgt tgetgtgeec acceagtaca getteeteet etgaceettt
ggetettett cetttgtact etteagetgg cacetgetee attetgeeet acatgatggg
1260
taactgtgat ctttcttccc tgttagattg taagcctccg tctttgtatc ccagcccta
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<211> 330
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Ala Lys Tyr His Leu Cys Ser Ala Gly Trp Leu Glu Thr Gly Arg Val
Ala Tyr Pro Thr Ala Phe Ala Ser Gln Asn Cys Gly Ser Gly Val Val
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40
Gly Ile Val Asp Tyr Gly Pro Arg Pro Asn Lys Ser Glu Met Trp Asp
                       55
Val Phe Cys Tyr Arg Met Lys Asp Val Asn Cys Thr Cys Lys Val Gly
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Tyr Val Gly Asp Gly Phe Ser Cys Ser Gly Asn Leu Leu Gln Val Leu
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Met Ser Phe Pro Ser Leu Thr Asn Phe Leu Thr Glu Val Leu Ala Tyr
                               105
Ser Asn Ser Ser Ala Arg Gly Arg Ala Phe Leu Glu His Leu Thr Asp
                           120
                                               125
Leu Ser Ile Arg Gly Thr Leu Phe Val Pro Gln Asn Ser Gly Leu Gly
                                           140
                       135
Glu Asn Glu Thr Leu Ser Gly Arg Asp Ile Glu His His Leu Ala Asn
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                   150
Val Ser Met Phe Phe Tyr Asn Asp Leu Val Asn Gly Thr Xaa Pro Ala
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                                   170
Asn Glu Gly Gly Lys Gln Ala Ala His His Cys Gln Pro Gly Pro Thr
                                185
Xaa Gln Pro Thr Glu Thr Arg Phe Val Asp Gly Arg Ala Ile Leu Gln
                           200
Trp Asp Ile Phe Ala Ser Asn Gly Ile Ile His Val Ile Ser Arg Pro
                                            220
                       215
Leu Lys Ala Pro Pro Ala Pro Val Thr Leu Thr His Thr Gly Leu Gly
                   230
                                        235
Ala Gly Ile Phe Phe Ala Ile Ile Leu Val Thr Gly Ala Val Ala Leu
                245
                                    250
Ala Ala Tyr Ser Tyr Phe Arg Ile Asn Arg Arg Thr Ile Gly Phe Gln
                                265
His Phe Glu Ser Glu Glu Asp Ile Asn Val Ala Ala Leu Gly Lys Gln
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Gln Pro Glu Asn Ile Ser Asn Pro Leu Tyr Glu Ser Thr Thr Ser Ala
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Pro Pro Glu Pro Ser Tyr Asp Pro Phe Thr Asp Ser Glu Glu Arg Gln
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3006

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cettecacea ggteetggge gagaageata agegeggeea eetggeegag geegagggee

acagggacac ttgcgacgaa gactcggtgg ccggcgagtc ggaccgcata gacgatggca

ctgttaatgg ccgcggctgc tccccgggcg agtcggcctc gggggggcctg tccaaaaagc

tgctgctggg cagccccagc tcgctgagcc ccttctctaa gcgcatcaag ctcgagaagg

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420
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aategeettt tgeeteeteg teggageaet eeteggagaa egggagettg egetteteea
caccgcccgg ggagctggac ggagggatct cggggcgcag cggcacggga agtggaggga
gcacgcccca tattagtggt ccgggcccgg gcaggcccag ctcaaaagag ggcagacgca
gegacacttg ttetteacac acceccatte ggegtagtac ceagagaget caagatgtgt
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<211> 76
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Ala Thr Arg Ala Ala Pro Cys Pro Thr Ser Cys Arg Ala Trp Cys Ser
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Ala Pro Cys Ser Thr Ser Ala Arg Pro Ser Thr Arg Ser Trp Ala Arg
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                            40
Ser Ile Ser Ala Ala Thr Trp Pro Arg Pro Arg Ala Thr Gly Thr Leu
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Ala Thr Lys Thr Arg Trp Pro Ala Ser Arg Thr Ala
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120
tttgaagete ggagtaaaac tgettgeaag cacetetgga agtgeagtgt ggaacateat
acatttttta gaatgccaga aaatgaatcc aattcactgt caagaaaact cagcaagttt
ggatccatac gttataagca ccgctacagt ggcaggacag ctttgcaaat gagccgagat
ctttctattc agcttccccg gcctgatcag aatgtgacaa gaagtcgaag caagacttac
360
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cctaagcgaa tagcacaaac acagccagct gaatcaaaca ccatcagtag gataactgca
aacatqqaaa atggagaaaa tgaaggaaca attaaaatta ttgcaccttc accagtaaaa
aqctttaaqa aaqcaaaqaa tgaaaataqc cctgataccc aaagaagcaa atctcatgca
ccgtgggaag aaaatggccc ccagagtgga ctctacaatt ctcccagtga tcgcactaag
tegecaaagt teeettacae gegtegeega aaceeeteet gtggaagtga caatgattet
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840
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aggegateca gacacagate tegttegaga ageceegata tecaageaaa agaagagtta
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1440
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1449
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Lys Val His Phe Lys Glu Thr Gln Phe Glu Leu Arg Val Leu Gly Lys
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Asp Cys Asn Glu Thr Ser Phe Phe Phe Glu Ala Arg Ser Lys Thr Ala
Cys Lys His Leu Trp Lys Cys Ser Val Glu His His Thr Phe Phe Arg
Met Pro Glu Asn Glu Ser Asn Ser Leu Ser Arg Lys Leu Ser Lys Phe
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65
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Gly Ser Ile Arg Tyr Lys His Arg Tyr Ser Gly Arg Thr Ala Leu Gln
               85 .
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Met Ser Arg Asp Leu Ser Ile Gln Leu Pro Arg Pro Asp Gln Asn Val
                                105
            100
Thr Arg Ser Arg Ser Lys Thr Tyr Pro Lys Arg Ile Ala Gln Thr Gln
                            120
Pro Ala Glu Ser Asn Thr Ile Ser Arg Ile Thr Ala Asn Met Glu Asn
                        135
Gly Glu Asn Glu Gly Thr Ile Lys Ile Ile Ala Pro Ser Pro Val Lys
                    150
                                        155
Ser Phe Lys Lys Ala Lys Asn Glu Asn Ser Pro Asp Thr Gln Arg Ser
                                    170
               165
Lys Ser His Ala Pro Trp Glu Glu Asn Gly Pro Gln Ser Gly Leu Tyr
                                                    190
                                185
            180
Asn Ser Pro Ser Asp Arg Thr Lys Ser Pro Lys Phe Pro Tyr Thr Arg
                            200
                                                205
Arg Arg Asn Pro Ser Cys Gly Ser Asp Asn Asp Ser Val Gln Pro Val
                        215
                                            220
Arg Arg Arg Lys Ala His Asn Ser Gly Glu Asp Ser Asp Leu Lys Gln
                    230
                                        235
Arg Arg Arg Ser Arg Ser Arg Cys Asn Thr Ser Ser Gly Ser Glu Ser
                245
                                    250
Glu Asn Ser Asn Arg Glu His Arg Lys Lys Arg Asn Arg Ile Arg Gln
                                265
                                                    270
Glu Asn Asp Met Val Asp Ser Ala Pro Gln Trp Glu Ala Val Leu Arg
                            280
Arg Gln Lys Glu Lys Asn Gln Ala Asp Pro Asn Asn Arg Arg Ser Arg
                        295
                                            300
His Arg Ser Arg Ser Arg Ser Pro Asp Ile Gln Ala Lys Glu Glu Leu
                    310
                                        315
Trp Lys His Ile Gln Lys Glu Leu Val Asp Pro Ser Gly Leu Ser Glu
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Glu Gln Leu Lys Glu Ile Pro Tyr Thr Lys Ile Glu
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ggagagggca gctactccaa ggtgaaggtg gccacatcca agaagtacaa gggtaccgtg
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cgagagetgt ccateetgeg gggegtgega caeeegeaca tegtgeaegt ettegagtte

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Lys Tyr Lys Gly Thr Val Ala Ile Lys Val Val Asp Arg Arg Arg Ala
                            40
Pro Pro Asp Phe Val Asn Lys Phe Leu Pro Arg Glu Leu Ser Ile Leu
                                             60
                        55
Arg Gly Val Arg His Pro His Ile Val His Val Phe Glu Phe Ile Glu
                                        75
Val Cys Asn Gly Lys Leu Tyr Ile Val Met Glu Ala Ala Ala Thr Asp
                                    90
Leu Leu Gln Ala Val Gln Arg Asn Gly Arg Ile Pro Gly Val Gln Ala
            100
                                105
                                                     110
Arg Asp Leu Phe Ala Gln Ile Ala Gly Ala Val Arg Tyr Leu His Asp
                            120
        115
His His Leu Val His Arg Asp Leu Lys Cys Glu Asn Val Leu Leu Ser
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Pro Asp Glu Arg Arg Val Lys Leu Thr Asp Phe Gly Phe Gly Arg Gln
                                         155
                    150
Ala His Gly Tyr Pro Asp Leu Ser Thr Thr Tyr Cys Gly Ser Ala Val
                165
                                    170
Arg Val Thr Arg Val Met His Phe Leu Ser Thr Tyr Cys Leu Pro Gly
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Pro Arg Ala His Gly Glu Glu Thr Trp Ala His Pro Cys Arg Lys Arg
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Asp Asn
    210
<210> 3863
<211> 341
<212> DNA
<213> Homo sapiens
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                                25
Leu Gly Cys Gln Pro Met Ala Arg Trp Phe Ser Gly Ser Leu Asp Gln
                            40
Lys Asn Leu Val Glu Ile Ser His Thr Val Phe Phe Pro Glu Ser Gln
Leu Arg Ala Lys Leu Lys Cys Pro Gly Gly Ser Cys Thr Pro Gly Leu
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Lys Lys Ile Gly Ser Leu Lys Val Ser Cys Glu Glu Phe Leu Leu Met
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Gly Leu Arg Tyr Gln His Leu Asp Pro Pro Ser Arg
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gagacctatg tgaagcccac ttaattttct gaaacttcac atcatgtacc ttcattgtaa
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tetectattt aetteactae aactaeaget tteattette attaeattae tttttetgag
360
```

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  492
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  Ser His Asn Phe Lys Phe Leu Val Arg Leu Cys Ser Gln Gly Phe Arg
                                  25
  Ile Ile Asn Thr Asn Gly Leu Gly Gln Pro Ser His Ser Ser Leu Leu
                              40
  Phe Thr Ser Leu Gln Leu Gln Leu Ser Phe Phe Ile Thr Leu Leu Phe
                                               60
                          55
  Leu Ser Ser Leu Gly Gln Ile Val Gln Thr Glu Tyr Ser Leu Thr Lys
                                           75
  Met Leu Gly Ser Arg Pro Gly Ala Ala Ala His Pro Cys Asn Pro Ser
                  85
                                       90
  Ile Leu Gly Gly Gln Ser Arg Gln Ile Thr Gln Gly Gln
              100
                                   105
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  <212> DNA
  <213> Homo sapiens
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600

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Gln Leu Ser Glu Met His Asp Glu Leu Asp Ser Ala Lys Arg Ser Glu
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Asp Arg Glu Lys Gly Ala Leu Ile Glu Glu Leu Leu Gln Ala Lys Gln
Asp Leu Gln Asp Leu Leu Ile Ala Lys Glu Glu Gln Glu Asp Leu Leu
Arg Lys Arg Glu Arg Glu Leu Thr Ala Leu Lys Gly Ala Leu Lys Glu
Glu Val Ser Ser His Asp Gln Glu Met Asp Lys Leu Lys Glu Gln Tyr
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Asp Ala Glu Leu Gln Ala Leu Arg Glu Ser Val Glu Glu Ala Thr Lys
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Asn Val Glu Val Leu Ala Ser Arg Ser Asn Thr Ser Glu Gln Asp Gln
Ala Gly Thr Glu Met Arg Val Lys Leu Leu Gln Glu Glu Asn Glu Lys
Leu Gln Gly Arg Ser Glu Glu Leu Glu Arg Arg Val Ala Gln Leu Gln
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Arg Gln Ile Glu Asp Leu Lys Gly Asp Glu Ala Lys Ala Lys Glu Thr
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Leu Lys Lys Tyr Glu Gly Glu Ile Arg Gln Leu Glu Glu Ala Leu Val
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His Ala Arg Lys Glu Glu Lys Glu Ala Val Ser Ala Arg Arg Ala Leu
Glu Asn Glu Leu Glu Ala Ala Gln Gly Asn Leu Ser Gln Thr Thr Gln
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Glu Gln Lys Gln Leu Ser Glu Lys Leu Lys Glu Glu Ser Glu Gln Lys
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245 250 Glu Gln Leu Arg Arg Leu Lys Asn Glu Met Glu Asn Glu Arg Trp His 265 Leu Gly Lys Thr Ile Glu Lys Leu Gln Lys Glu Met Ala Asp Ile Val 280 Glu Ala Ser Arg Thr Ser Thr Leu Glu Leu Gln Asn Gln Leu Asp Glu Tyr Lys Glu Lys Asn Arg Arg Glu Leu Ala Glu Met Gln Arg Gln Leu 315 310 Lys Glu Lys Thr Leu Glu Ala Glu Lys Ser Arg Leu Thr Ala Met Lys 325 330 335 Met Gln Asp Glu Met Arg Leu Met 340 <210> 3869 <211> 1226 <212> DNA <213> Homo sapiens <400> 3869 ttttttttgg ctttgggtat tttttttgtc ttctttctt tttttaagat caatattcat tetteatttg ceetegtaac gaaaatagat ttttaaatge etcaaatata caaacateat tgatgcacac acattccaga aatgcagagg tatgctgctg ccacggggta ggggtgcggg 180 aggeggeetg geetcatgge egeagacegt geeceageee gggeetggea ggtagetgge cactgataaa tgccactggg atcctaggag aagctgggga ccatgcgtga ggtactgaag gggaccatgg tggatggcat cctgggcact ttgtagcttg tctgagggaa aggcctctgc 360 tgccatagaa aagctggaca catgtcaccc tggggccctg acatcctaaa atgccccact 420 gactaccagt cactaggaga aaggtctccg gctatgccct tcccagtgat gcttgcccca 480 gagtgactgg tcacaggtgg gggacaggtt tgctccagaa accgtaggcc tttcttgtct 540 ggccccctaa agaggaccca agatcaggaa aactccccag tttaaaaaaa tatctgtcca 600 tetgtatata aaatacetat tattagetgg agttgcacac atgcaggace aggagagact gcctgaggtt ctgcctggac cgaaggaggc ctcgctcaca gcacctctgt gaggggactg gtgctcctgg gaagtcactt ctcttggtga ccgagctgac accccctcca cttggaaagc acagggactg agcaggcggg acctgtgctg gagggagacc ctcctggtga ggaactatgc gggcettetg ggceteagea getecageee acteetggee tggcaggeea cetgeeeace 900 cacccaccca tetgectetg geececagtg aagteagaag aggeaggage eeegeagget gtgagcctgg cgcaggtcgg ctgacagcga gcttctcatc tgcctggtgg tagagcggac

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Pro Gly Trp Gly Thr Val Cys Gly His Glu Ala Arg Pro Pro Pro Ala
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Pro Leu Pro Arg Gly Ser Ser Ile Pro Leu His Phe Trp Asn Val Cys
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Pro Val Gln Ser Pro Gln Arg Ser Val Asp Ser Ile Ser Gln Glu Ser
Ser Thr Ser Ser Phe Ser Ser Met Ser Ala Gly Ser Arg Gln Glu Glu
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Thr Lys Lys Asp Tyr Arg Glu Val Glu Lys Leu Leu Arg Ala Val Ala
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Asp Gly Asp Leu Glu Met Val Arg Tyr Leu Leu Glu Trp Thr Glu Glu
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Asp Leu Glu Asp Ala Glu Asp Thr Val Ser Ala Ala Asp Pro Glu Phe
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Cys His Pro Leu Cys Gln Cys Pro Lys Cys Ala Pro Ala Gln Lys Arg
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Leu Ala Lys Val Pro Ala Ser Gly Leu Gly Val Asn Val Thr Ser Gln
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Asp Gly Ser Ser Pro Leu His Val Ala Ala Leu His Gly Arg Ala Asp
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Leu Ile Arg Leu Leu Lys His Gly Ala Asn Ala Gly Ala Arg Asn
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Ala Asp Gln Ala Val Pro Leu His Leu Ala Cys Gln Gln Gly His Phe
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Gln Val Val Lys Cys Leu Leu Asp Ser Asn Ala Lys Pro Asn Lys Lys
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Asp Leu Ser Gly Asn Thr Pro Leu Ile Tyr Ala Cys Ser Gly Gly His
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                                    235
Val Ala Leu Leu Gln His Gly Ala Ser Ile Asn Ala
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                                250
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660			cggtactacc		,
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ctgaaggaca 1740	tggcggactc	ccgccgcatc	aatgccaaca	tccgggagga	ggatgagaag

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Pro Pro Lys Glu Glu Glu Leu Arg Ala Ala Val Glu Val Leu Arg Gly
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Asn Asp Leu Gln Ala Asn Ile Ser Pro Glu Phe Trp Asn Ala Ile Ser
Gln Cys Glu Asn Ser Ala Asp Glu Pro Gln Cys Leu Leu Leu Leu
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Asp Ala Phe Gly Leu Leu Glu Ser Arg Leu Asp Pro Tyr Leu Arg Ser
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Tyr	Gly	Cys	Phe	Leu	Arg	Val	Tyr	Met	Gln	Ser	Lys	Arg	Lys	Gly	Glu
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Gly	Gly	Thr	Asp	Pro	Glu	Leu		Gly	Glu	Leu	Asp		Arg	Tyr	Ala
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Arg		Arg	Tyr	Tyr	Arg		Leu	Gin	ser	Pro	Leu 220	Cys	Ala	GIY	cys
C ~ ~	210	n c n	Tvc	Gl n	Gln	215 CV5	Tro	Cve	Δνα	Gln	Ala	ī.eu	Glu	Gln	Phe
225	261	дор	БУЗ	GIII	230	Cys		-70		235					240
	Gln	Leu	Ser	Gln		Leu	His	Arq	Leu		Leu	Leu	Glu	Arg	
,				245					250					255	
Ser	Ala	Glu	Ala	Val	Thr	Thr	Thr	Leu	His	Gln	Val	Thr	Arg	Glu	Arg
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Met	Glu	Asp	Arg	Cys	Arg	Gly	Glu	$\mathtt{Tyr}$	Glu	Arg	Ser		Leu	Arg	Glu
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Phe		Arg	Trp	Ile	Glu		Val	Val	GLY	Trp	Leu	GIY	Lys	Val	Phe
*	290	7 - m	c1	Dira	77-	295	Dro	<b>71</b> -	co~	Bro	300 Glu	בות	Glv	Acn	Thr
305	GIII	ASP	GIY	PIO	310	Arg	PIO	AIA	Ser	315	Giu	Ala	GLY	ASII	320
	Ara	Ara	Trn	Ara		His	Val	Gln	Arg		Phe	Tvr	Arq	Ile	
Dou	•••			325	-1-				330			- 4	,	335	- 4
Ala	Ser	Leu	Arg	Ile	Glu	Glu	Leu	Phe	Ser	Ile	Val	Arg	Asp	Phe	Pro
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Asp		Arg	Gln	Gln	Leu		Val	Ser	Leu	Lys	Ala	Ala	Leu	Glu	Thr
7	370	T 011	ui a	Dwo	C3.v	375	λcn	Thr	Cvc	yen	380 Ile	Tla	Thr	T.e.ii	Tur
385	Leu	nea	uıż	PIO	390	Val	ASII	1111	Cys	395	116	TIC.	1111	ncu.	400
	Ser	Ala	Ile	Lvs		Leu	Arg	Val	Leu		Pro	Ser	Met	Val	
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Leu	Glu	Val	Ala	Cys	Glu	Pro	Ile	Arg	Arg	Tyr	Leu	Arg	Thr	Arg	Glu
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Asp	Thr	Val	Arg	Gln	Ile	Val		Gly	Leu	Thr	Gly		Ser	Asp	Gly
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Thr	_	Asp	Leu	Ala	Val		Leu	Ser	гàг	Thr		Pro	Ala	ser	Leu
~1	450	C1.	Cln	yen	cor	455	N cm	λςη	Sar	Glv	460	Pro	Glu	Δsn	Trp
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Leu 545	_	ьeu	Arg	rne	550		HIG	PIO	Mec	555	rne	cys	GIU	val	Met 560
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Lys Lys Tyr Glu Gln Leu Lys Ala Met Arg Thr Leu Ser Trp Lys His
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Thr Leu Gly Leu Val Thr Met Asp Val Glu Leu Ala Asp Arg Thr Leu
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Ser Val Ala Val Thr Pro Val Gln Ala Val Ile Leu Leu Tyr Phe Gln
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Asp Gln Ala Ser Trp Thr Leu Glu Glu Leu Ser Lys Ala Val Lys Met
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Pro Val Ala Leu Leu Arg Arg Arg Met Ser Val Trp Leu Gln Gln Gly
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Val Leu Arg Glu Xaa Ser Pro Pro Ala Pro Ser Leu Ser Leu Arg Arg
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Ser Gly Leu Arg Thr Gly Xaa Asn Met Val Leu Ile Asp Ser Asp Asp
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Glu Ser Asp Ser Gly Met Ala Ser Gln Ala Asp Gln Lys Glu Glu Glu
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Thr Gly Pro Ala Leu Ala Glu Ile Asp Leu Gln Glu Leu Gln Gly Tyr
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Gln Thr Thr Phe Glu Ser Gln Asp Arg Lys Ala Val Ser Pro Ser Ser
Ser Glu Lys Arg Ser Lys Asn Pro Ile Ser Arg Pro Leu Glu Gly Lys
Lys Ser Leu Ser Leu Ser Ala Lys Thr His Asn Ile Gly Phe Asp Lys
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Ser Lys Asp Thr Arg Glu Ile Lys Thr Asp Phe Ser Leu Ser Ile Ser
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Asn Ser Ser Asp Val Ser Ala Lys Asp Lys His Ala Glu Asp Asn Glu
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Lys Arg Leu Ala Ala Leu Glu Ala Arg Gln Lys Ala Lys Glu Val Gln
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190

185

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	290					295	Thr				300	-			_
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		355	-		_		Val 360				_	365			
	370		-	_		375	Ser				380		_		-
385		•			390	Ī,	Ala	_		395			-		400
			•	405			Val		410	_		•		415	_
•			420	_			Pro	425					430		
		435					His 440					445			
-	450			-	-	455	Asn His				460				
465		_		-	470					475				-	480
				485	_		Ser		490				_	495	_
			500		_		Ile	505	-				510		
		515					Leu 520					525		_	
	530					535	Thr				540				
545					550	_	Pro		=	555					560
				565			Leu		570					575	
ьys	A1a	Ala	Asp 580	тте	Asp	GIN	GIU	Val 585	rys	GIu	Arg	Ala	Ile 590	Ser	Cys
	~ .	~ 1		-1	-	•	Leu		_	_	_	~3	_	_	_

		595					600					605			
Pro	Asn 610	Thr	Leu	Gln	Ile	Phe 615	Leu	Glu	Arg	Leu	Lys 620	Asn	Glu	Ile	Thr
Arg 625	Leu	Thr	Thr	Val	Lys 630	Ala	Leu	Thr	Leu	Ile 635	Ala	Gly	Ser	Pro	Leu 640
Lys	Ile	Asp	Leu	Arg 645	Pro	Val	Leu	Gly	Glu 650		Val	Pro	Ile	Leu 655	
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Met	Ile 690	Asp	Ala	Val	Leu	Asp 695	Glu	Leu	Pro	Pro	Leu 700		Ser	Glu	Ser
Asp 705	Met	His	Val	Ser	Gln 710	Met	Ala	Ile	Ser	Phe 715	Leu	Thr	Thr	Leu	Ala 720
Lys	Val	Tyr	Pro	Ser 725	Ser	Leu	Ser	Lys	Ile 730		Gly	Ser	Ile	Leu-	
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			Tyr 980					985					990		
		995	His				1000	)				1005	;	_	
	1010	)	Leu			1015	;				1020	)			
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Arg Lys Val Val Asp Pro Glu Thr Gly Arg Thr Arg Leu Ile Lys Gly
Asp Gly Glu Val Leu Glu Glu Ile Val Thr Lys Glu Arg His Arg Glu
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Ser Gly Leu Phe Ala Leu Cys Thr Leu Asp Gly Thr Leu Lys Leu Met
Glu Glu Met Glu Glu Ala Asp Lys Leu Leu Trp Ser Val Gln Val Asp
His Gln Leu Phe Ala Leu Glu Lys Leu Asp Val Thr Gly Asn Gly His
Glu Glu Val Val Ala Cys Ala Trp Asp Gly Gln Thr Tyr Ile Ile Asp
His Asn Arg Thr Val Val Arg Phe Gln Val Asp Glu Asn Ile Arg Ala
Phe Cys Ala Gly Leu Tyr Ala Cys Lys Glu Gly Arg Asn Ser Pro Cys
Leu Val Tyr Val Thr Phe Asn Gln Lys Ile Tyr Val Tyr Trp Glu Val
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1200

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Asp Asn Ile Lys Val Cys Ser Asn Asp Thr Gly Ser Gly Lys Phe Lys
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Cys Val Cys Ile Thr Met Arg Val Pro Arg Asn Pro Thr Ile Gly Asp
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Lys Phe Ala Ser Arg His Gly Gln Lys Gly Ile Leu Ser Arg Leu Trp
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Pro Ala Glu Asp Met Pro Phe Thr Glu Ser Gly Met Val Pro Asp Ile
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Leu Phe Asn Pro His Gly Phe Pro Ser Arg Met Thr Ile Gly Met Leu
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Ile Glu Ser Met Ala Gly Lys Ser Ala Ala Leu His Gly Leu Cys His
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Asp Ala Thr Pro Phe Ile Phe Ser Glu Glu Asn Ser Ala Leu Glu Tyr
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Phe Gly Glu Met Leu Lys Ala Ala Gly Tyr Asn Phe Tyr Gly Thr Glu
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Arg Leu Tyr Ser Gly Ile Ser Gly Leu Glu Leu Glu Ala Asp Ile Phe
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Ile Gly Val Val Tyr Tyr Gln Arg Leu Arg His Met Val Ser Asp Lys
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                                                205
Phe Gln Val Arg Thr Thr Gly Ala Arg Asp Arg Val Thr Asn Gln Pro
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Ile Gly Gly Arg Asn Val Gln Gly Gly Ile Arg Phe Gly Glu Met Glu
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Arg Asp Ala Leu Leu Ala His Gly Thr Ser Phe Leu Leu His Asp Arg
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Leu Phe Asn Cys Ser Asp Arg Ser Val Ala His Val Cys Val Lys Cys
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Ile Glu Ser Thr Ser Pro Ile Ser Arg Thr Asp Glu Ile Arg Lys Asn
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Thr Tyr Arg Thr Leu Asp Ser Leu Glu Gln Thr Ile Lys Gln Leu Glu
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Asn Thr Ile Ser Glu Met Ser Pro Lys Ala Leu Val Asp Thr Ser Cys
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Ser Ser Asn Arg Asp Ser Val Ala Ser Ser Ser His Ile Ala Gln Glu
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Ala Ser Pro Arg Pro Leu Leu Val Pro Asp Glu Gly Pro Thr Ala Leu
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Glu Pro Pro Thr Ser Ile Pro Ser Ala Ser Arg Lys Gly Ser Ser Gly
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Ala Pro Gln Thr Ser Arg Met Pro Val Pro Met Ser Ala Lys Asn Arg
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Pro Gly Thr Leu Asp Lys Pro Gly Lys Gln Ser Lys Leu Gln Asp Pro
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Arg Gln Tyr Arg Gln Ala Asn Gly Ser Ala Lys Lys Ser Gly Gly Asp
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Phe Lys Pro Thr Ser Pro Ser Leu Pro Ala Ser Lys Ile Pro Ala Leu
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Ser Pro Ser Ser Gly Lys Ser Ser Ser Leu Pro Ser Ser Ser Gly Asp
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Ser Ser Asn Leu Pro Asn Pro Pro Ala Thr Lys Pro Ser Ile Ala Ser
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Asn Pro Leu Ser Pro Gln Thr Gly Pro Pro Ala His Ser Ala Ser Leu
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Ile Pro Ser Val Ser Asn Gly Ser Leu Lys Phe Gln Ser Leu Thr His
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Thr Gly Lys Gly His His Leu Ser Phe Ser Pro Gln Ser Gln Asn Gly
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                                              285
Arg Ala Pro Pro Pro Leu Ser Phe Ser Ser Pro Pro Ser Pro Ala
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Ser Ser Val Ser Leu Asn Gln Gly Ala Lys Gly Thr Arg Thr Ile His
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Arg Pro Ser Leu Gly Arg Val Leu Pro Gly Ser Ser Val Leu Phe Leu
Cys Asp Met Gln Glu Lys Phe Arg His Asn Ile Ala Tyr Phe Pro Gln
Ile Val Ser Val Ala Ala Arg Met Leu Lys Val Ala Arg Leu Leu Glu
Val Pro Val Met Leu Thr Glu Gln Tyr Pro Gln Gly Leu Gly Pro Thr
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110

105

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Leu Arg Ser Val Leu Leu Cys Gly Ile Glu Ala Gln Ala Cys Ile Leu
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Asn Thr Thr Leu Asp Leu Leu Asp Arg Gly Leu Gln Val His Val Val
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Thr Gly Glu Thr Ala Glu Gly Leu Pro Pro Val Arg Ile Pro Pro Phe
Ser Val Thr Thr Ala Asn Gly Thr Ile Ser Phe Thr Glu Met Val Gln
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Asp Met Gly Ala Gly Leu Ala Val Val Pro Leu Met Gly Leu Leu Glu
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Ser Ile Ala Val Ala Lys Ala Phe Ala Ser Gln Asn Asn Tyr Arg Ile
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Asp Ala Asn Gln Glu Leu Leu Ala Ile Gly Leu Thr Asn Met Leu Gly
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Val Asn Ala Gln Ser Gly Val Cys Thr Pro Ala Gly Gly Leu Val Thr
Gly Val Leu Val Leu Leu Ser Leu Asp Tyr Leu Thr Ser Leu Phe Tyr
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Tyr Ile Pro Lys Ser Ala Leu Ala Ala Val Ile Ile Met Ala Val Ala
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Pro Leu Phe Asp Thr Lys Ile Phe Arg Thr Leu Trp Arg Val Lys Arg
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                                            220
Leu Asp Leu Leu Pro Leu Cys Val Thr Phe Leu Leu Cys Phe Trp Glu
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Val Gln Tyr Gly Ile Leu Ala Gly Ala Leu Val Ser Leu Leu Met Leu
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Leu His Ser Ala Ala Arg Pro Glu Thr Lys Val Ser Glu Gly Pro Val
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Phe Ala Thr Ala Phe Leu Ser Ser Glu Pro Arg Leu Asp Ile Leu Ile
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 Arg Pro Val Val Leu Ala Ala Gly Ala Ala Ala Tyr Ala Asp Thr Lys
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 Thr Gly Val Thr Cys Tyr Ala Ala His Pro Gly Pro Val Asn Ser Glu
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 Val Pro Gly Ala Tyr Phe Phe Ser Phe Thr Ala Gly Lys Ala Pro His
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 Leu Ala Phe Asp Glu Gln Arg Arg Pro Gly Ala Arg Arg Ala Ala Ser
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4380					tetgtecatt
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Arg Gly Pro Pro Gly Leu Glu Asp Thr Thr Ser Lys Lys Gln Lys
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Asp Arq Ala Asn Gln Glu Ser Lys Asp Gly Asp Pro Arg Lys Glu Thr
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Gly Ser Arg Tyr Val Ala Gln Ala Gly Leu Glu Pro Leu Ala Ser Gly
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Asp Pro Ser Ala Ser Ala Ser His Ala Ala Gly Ile Thr Gly Ser Arg
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His Arg Thr Arg Leu Phe Phe Pro Ser Ser Ser Gly Ser Ala Ser Thr
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Ala Glu Glu Val Ile Val Lys Leu Arg Val Gly Val Gly Pro Leu Gln
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Ser Ser Cys Ala Lys Val Gln Thr Arg Lys Gly Ser Leu Leu His Leu
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Val Pro Pro Gly Asn Asp Pro Val Ser Pro Ala Met Val Arg Ser Arg
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Asp Ala Ala Thr Leu Val Asp Gly Lys Glu Pro Glu Ser Met Val Asn
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Leu Ala Phe Val Lys Asn Asp Ser Tyr Glu Lys Gly Pro Asp Ser Val
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	Pne	Leu	Arg	ren		Pro	GIY	Cys	GLY		nis	1111	1111	PHE	Arg .
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Cys	Phe	Thr	Ala	Ser	Arg	Ile	Asp	Ile	Cys	Leu	Arg	Lys	Arg	Gln	Ser
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Lvs	Val	Ala	Val	Pro	Thr	Gly	Pro	Thr	Pro	Leu	Asp	Ser	Thr	Pro	Pro
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Glv	Gly	Ala	Pro	His	Pro		Thr	Glv	Gln	Glu	Glu	Ala	Arq	Ala	Val
465	0-7				470			2		475					480
	Lys	Δen	Lare	Ser	_	Δla	Ara	Ser	Glu		Thr	Glv	Leu	Asp	
GIU	ny 3	АЗР	Lys	485	2,5				490			1		495	
1707	Ala	ጥኮሎ	7 ~~		Dro	Mat	Clu	Hic		Thr	Dro	Lvs	Pro		Thr
vaı	MIG	1111	500	1111	PIO	MEC	Gru	505	Val	1111	110	<i>-</i> 173	510	014	
•••	•			7	t	Dwa	Th.		Mot	17-1	Dro	Dro		Dro	uic
HIS	Leu		ser	Pro	гуѕ	PIO		Cys	Met	val	PLO		Met	PIU	птэ
_	_	515	_	~ 3			520	~1	<b>01</b>	<b>a</b> 1	<b>03</b>	525	<b>01</b>	<b>01</b>	
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Wic	Lys			λen	Acn	Ser			Va1	Δen	T.e.u		Gln	Glv	Gln
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Ma ese		Cor	Tvo	T 011	1721		Dro	17-1	Cvc	ת 1 ת		17a 1	Sar	Tla	Thr
-		Ser	гåг	ьęц		cys	PIO	vaı	Cys	715	Буз	Val	JCL	116	720
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Pue	Asp	Pro	Pne		Tyr	Leu	PIO	vai		Leu	PIO	GIII	цуѕ		Lys
	_	_		725	_	-1		_	730		***	<b>a</b>	T	735	T1 -
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			1700	)				1709	5				1710	)	Leu
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	1730	)				1735	5				1740	)			Asn
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GIII	GLY	203		цуз	Буѕ	GLY	204		Ser	GIÅ	rea	204		ser	Pne
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Pro	Glv	Asp			Thr	Thr	Δla		Glu	Ser	Ser	Glv	227(		אן ה
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Val Ser Ser Arg Pro Ser Val Glu Gln Leu Ser Ser Leu Ile Lys Thr
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Glu Ile Pro Leu Glu Thr Cys Cys Ser Ser Glu Leu Lys Gly Gly
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Phe Gln Arg Gly Leu Ala Val Ser Asp Asn Gly Pro Cys Leu Gly Tyr
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Glu Leu Gln Lys Gly Ile Ile Arg His Asp Ser Phe Trp Asp Lys Leu
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<210> 3936
<211> 265
<212> PRT
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## <213> Homo sapiens

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                                  10
Val Gly Gly Thr Glu His Ala Tyr Arg Pro Gly Arg Arg Val Cys Ala
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                               25
Val Arg Ala His Gly Asp Pro Val Ser Glu Ser Phe Val Gln Arg Val
                            40
Tyr Gln Pro Phe Leu Thr Thr Cys Asp Gly His Arg Ala Cys Ser Thr
                       55
                                           60
Tyr Arg Thr Ile Tyr Arg Thr Ala Tyr Arg Arg Ser Pro Gly Leu Ala
                   70
Pro Ala Arg Pro Arg Tyr Ala Cys Cys Pro Gly Trp Lys Arg Thr Ser
                                    90
Gly Leu Pro Gly Ala Cys Gly Ala Ala Ile Cys Gln Pro Pro Cys Arg
                               105
Asn Gly Gly Ser Cys Val Gln Pro Gly Arg Cys Arg Cys Pro Ala Gly
                            120
                                                125
       115
Trp Arg Gly Asp Thr Cys Gln Ser Asp Val Asp Glu Cys Ser Ala Arg
   130
                       135
                                           140
Arg Gly Gly Cys Pro Gln Arg Cys Val Asn Thr Ala Gly Ser Tyr Trp
                   150
                                        155
Cys Gln Cys Trp Glu Gly His Ser Leu Ser Ala Asp Gly Thr Leu Cys
                                    170
Val Pro Lys Gly Gly Pro Pro Arg Val Ala Pro Asn Pro Thr Gly Lys
                                185
Gln Pro Trp Leu Cys Leu Ala Trp Gly Gly Gln Ala Val Asp Ile
       195
                            200
Ala Val Trp Leu Leu Gly Met Val Gly Gly Thr Gly Ile Trp Ala Glu
                       215
                                            220
Gly Gly Gly Asp Ser Leu Ser Arg Glu Gly Gly Trp Gly Gly Arg Ile
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                                        235
Gly Gly Phe Pro Arg Thr Gly Gly Arg Leu Pro Gly Ala Ser Tyr Gln
               245
                                    250
Pro Arg Arg Gln Lys Cys Pro Val Pro
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<210> 3937 <211> 744

<212> DNA

<213> Homo sapiens

## <400> 3937

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caaggteegg egeceaegga ggeaagteeg gteteaeggt gaceteeege eggegeegee 120

ttcgccgcca accatccagt tcttcctcca ggccacgttc tccttgcgga aaatgctgat

ctcagtcgca atgctgggcg caggggctgg cgtgggctac gcgctcctcg ttatcgtgac

cccgggagag cggcggaagc aggaaatgct aaaggagatg ccactgcagg acccaaggag 300

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cacgcaggag aacgtggcct gngaggaaga actggatggt tggcggcgaa ggcggcgcca
420
gcgggaggtc accgtgagac cggacttgcc tccgtgggcg ccggaccttg gcttgggcgc
aggaatccga ggcagccttt ctccttcgtg ggcccagcgg agagtccgga ccgagatacc
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acctaccaat gcttagagac gcgt
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<211> 154
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<213> Homo sapiens
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Pro Pro Ala Gly Ala Ala Phe Ala Ala Asn His Pro Val Leu Pro Pro
Gly His Val Leu Leu Ala Glu Asn Ala Asp Leu Ser Arg Asn Ala Gly
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                                25
Arg Arg Gly Trp Arg Gly Leu Arg Ala Pro Arg Tyr Arg Asp Pro Gly
                            40
Arg Ala Ala Glu Ala Gly Asn Ala Lys Gly Asp Ala Thr Ala Gly Pro
                        55
                                            60
Lys Glu Gln Gly Gly Gly Gln Asp Pro Ala Ala Ile Ala Gly His
                    70
                                        75
Ser Ala Gly Gly Ser Asp His Ala Gly Glu Arg Gly Leu Xaa Gly Arg
                                    90
Thr Gly Trp Leu Ala Ala Lys Ala Ala Pro Ala Gly Gly His Arg Glu
                                105
Thr Gly Leu Ala Ser Val Gly Ala Gly Pro Trp Leu Gly Arg Arg Asn
                            120
                                                125
Pro Arg Gln Pro Phe Ser Phe Val Gly Pro Ala Glu Ser Pro Asp Arg
Asp Thr Met Pro Gly Leu Ser Gly Val Leu
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<210> 3939
<211> 490
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<213> Homo sapiens
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acgggaaagg tgagatggaa acacacagaa gatgagagag acagacagtg ggaggcagag
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ctgaagactg tgaaagaaag ggcaacagac agcgagggag gaagagacag gctggagccc
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gataaccact gtctcctgga gcctgtgggt cggcctcctg ctctgctgca agggccctgc
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taaggaaccc acggtgcgga ggtgtcagga ggaaggtagc agcgtcttga ctttccaccg
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cctcacgcgt
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<210> 3940
<211> 62
<212> PRT
<213> Homo sapiens
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Thr Asp Arg Gln Thr Gly Lys Val Arg Trp Lys His Thr Glu Asp Glu
Arg Asp Arg Gln Trp Glu Ala Glu Leu Lys Thr Val Lys Glu Arg Ala
Thr Asp Ser Glu Gly Gly Arg Asp Arg Leu Glu Pro Phe Leu
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<212> DNA
<213> Homo sapiens
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aggtgggccc tgccctgtgg ccactgatgt gggaacctga ggtcacatca gtctgtggac
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cacattgcag etggetteet cetgggetga accteettgt getttgagae tgacaggaag
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540
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	ctcagaagag	ggggaccaag	ccctaggccc	catacttccc	agaaggagcc
	aggggcatct	gaaaggatgg	agtectggee	cagctgggcc	tcaggggaca
	ctcaagagag	gctgcggctg	acaaggggct	ggagcccaca	aggaggctgt
	cccagagcac	tccgagttca	gacacacttc	caccagctct	cctaggctcc
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	ctctgagaaa	ataagcttct	ccttcatgat	gctgacgtcc	cggctggtcc
	agcactcagc	atgatctgct	cagggttgta	gctccgtatg	ccacccaggc
	caagtgatag	ttctggagca	cgaagatgcc	cacgatgagg	gtgaaggaga
	agtgacccac	atgagacagt	actcgtccgg	gggcatgatc	cagagggggg
	ggacagggtg	tgggagttgt	cagaggtgac	ggatgggacc	cccgcacacc
	gaagagccac	ggtgcgttga	ctgtgtagag	gttcacactc	aggttccagg
	cctgagctcc	tggcgggaca	cctgagtgta	gcgcaggttc	agccgctgga
	ccgcaggctg	gcgactgcct	ccttggagcc	tgatgtctgt	tggaagccgg
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tcgtgcagaa 1800	gagaagtctg	aggctgcctc	tcttctgcct	gcaggtcatg	tggctgccta
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aggaggcagt 1920	cgccagcctg	cggagaggcc	acatccagcg	gctgaacctg	cgctacactc
aggtgtcccg 1980	ccagcgtcca	ggtgcctgcc	ctgccctggg	ctcctccagg	agagggtggg
actgagtctc 2040	taacagtcct	gccaccacca	cccccaaca	cacacacaca	cacacacaca
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<210> 3942

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<212> PRT
<213> Homo sapiens
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Ala Pro Tyr Phe Pro Glu Gly Ala Pro Gly Leu Gln Gly His Leu Lys
Gly Trp Ser Pro Gly Pro Ala Gly Pro Gln Gly Thr Gly Ser Pro Pro
                                                                         . 25
Gln Glu Arg Leu Arg Leu Thr Arg Gly Trp Ser Pro Gln Gly Gly Cys
                                                                  40
Gly Ala Arg Ser Gln Ser Thr Pro Ser Ser Asp Thr Leu Pro Pro Ala
                                                                                                        60
Leu Leu Gly Ser Pro Ala Ser Val Ser Gly Thr Gly Gly Thr Asp Met
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Ser Ser Ala Asn Ala His Ser Ala Leu
<210> 3943
<211> 1524
<212> DNA
<213> Homo sapiens
<400> 3943
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accordgac coordects coordinate corrections are considered accordinate considered accordinat
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gtggggctag cggactacgg agacgggccc gactcctccg acgccgatcc ggacagcggc
acagaggagg gagttctgga cttcagtgac cccttcagca ctgaagtgaa gccgagaatc
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atgtetecca acgaaactet gttettggag agcactaata agatatgeeg ggaagatgtt
tocaacagot cottigicaa titteagatt tgggactice caggacagat tgactititt
gaccctacat ttgactatga gatgatcttc cggggaacag gagcattgat atttgtcatt
gacgcacagg atgactacat ggaggcttta acaagacttc acattactgt ttctaaagcc
tacaaagtta acccagacat gaattttgag gtttttattc ataaagttga tggtctgtct
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gatgctggat tagaaaaaat tcacctcagc ttttatctga caagcatata tgatcattca
atatttgaag ettttageaa agttgtteag aaactgatte cacaacteec aactetggag
 aatttgctga acatctttat ctcaaattct ggaattgaaa aggcatttct atttgatgtg
 900
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gtcagtaaaa tttatattgc aactgatagt actccggtgg atatgcaaac ctatgagctc

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tgctgtgata tgatagatgt ggttattgac atctcttgta tttatggtct caaagaagat
ggagcaggaa ccccctatga caaggaatcc acagccatca taaagcttaa taatacaacc
1080
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aqctttqaaa qaaaagggct aattgactat aattttcatt gcttccggaa ggccattcat
gaagtttttg aggtgagaat gaaagtagta aaatctcgaa aggttcagaa tcggctgcag
1260
aagaaaaaga gagccacccc taatgggacc cctagagtgc tgctgtaggt gaggtttcag
gaatgtettt tgaaateaga eettateeat gaggetgetg egeeatgttg cactaaagga
agaggaagaa ggagattggg acacatacca ttgatttgtt gttaaaaaaa aaaaattcct
aaaaaaaaa aaaaaaaaaa aaaa
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<211> 435
<212> PRT
<213> Homo sapiens
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Arg Leu Gly Pro Thr Pro Gly Pro Pro Pro Ser Pro Gly Arg Pro Ala
                               25
Val Gly Thr Met Ser Gln Val Leu Gly Lys Pro Gln Pro Gln Asp Glu
Asp Asp Ala Glu Glu Glu Glu Glu Asp Glu Leu Val Gly Leu Ala
Asp Tyr Gly Asp Gly Pro Asp Ser Ser Asp Ala Asp Pro Asp Ser Gly
                   70
                                      75
Thr Glu Glu Gly Val Leu Asp Phe Ser Asp Pro Phe Ser Thr Glu Val
                                  90
               85
Lys Pro Arg Ile Leu Leu Met Gly Leu Arg Arg Ser Gly Lys Ser Ser
           100
                               105
                                                  110
Ile Gln Lys Val Val Phe His Lys Met Ser Pro Asn Glu Thr Leu Phe
                           120
                                              125
Leu Glu Ser Thr Asn Lys Ile Cys Arg Glu Asp Val Ser Asn Ser Ser
                       135
                                          140
Phe Val Asn Phe Gln Ile Trp Asp Phe Pro Gly Gln Ile Asp Phe Phe
                   150
                                      155
Asp Pro Thr Phe Asp Tyr Glu Met Ile Phe Arg Gly Thr Gly Ala Leu
               165
                                  170
Ile Phe Val Ile Asp Ala Gln Asp Asp Tyr Met Glu Ala Leu Thr Arg
                               185
Leu His Ile Thr Val Ser Lys Ala Tyr Lys Val Asn Pro Asp Met Asn
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195
                            200
                                                205
Phe Glu Val Phe Ile His Lys Val Asp Gly Leu Ser Asp Asp His Lys
                      215
Ile Glu Thr Gln Arg Asp Ile His Gln Arg Ala Asn Asp Asp Leu Ala
                    230
                                        235
Asp Ala Gly Leu Glu Lys Ile His Leu Ser Phe Tyr Leu Thr Ser Ile
                                    250
                245
Tyr Asp His Ser Ile Phe Glu Ala Phe Ser Lys Val Val Gln Lys Leu
                                265
Ile Pro Gln Leu Pro Thr Leu Glu Asn Leu Leu Asn Ile Phe Ile Ser
                            280
Asn Ser Gly Ile Glu Lys Ala Phe Leu Phe Asp Val Val Ser Lys Ile
                        295
Tyr Ile Ala Thr Asp Ser Thr Pro Val Asp Met Gln Thr Tyr Glu Leu
                    310
                                        315
Cys Cys Asp Met Ile Asp Val Val Ile Asp Ile Ser Cys Ile Tyr Gly
               325
                                    330
                                                        335
Leu Lys Glu Asp Gly Ala Gly Thr Pro Tyr Asp Lys Glu Ser Thr Ala
           340
                                345
Ile Ile Lys Leu Asn Asn Thr Thr Val Leu Tyr Leu Lys Glu Val Thr
                            360
Lys Phe Leu Ala Leu Val Cys Phe Val Arg Glu Glu Ser Phe Glu Arg
                       375
                                            380
Lys Gly Leu Ile Asp Tyr Asn Phe His Cys Phe Arg Lys Ala Ile His
                   390
                                        395
Glu Val Phe Glu Val Arg Met Lys Val Val Lys Ser Arg Lys Val Gln
                                    410
Asn Arg Leu Gln Lys Lys Lys Arg Ala Thr Pro Asn Gly Thr Pro Arg
                                425
Val Leu Leu
       435
<210> 3945
<211> 696
<212> DNA
<213> Homo sapiens
<400> 3945
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agccgagagt ggatcgctgg gctgggctaa cggcgacgga gagcgcgccc tcgctgactc ,
egggegegee cageagtage acegeeegeg ecegeeeetg gacacttgta agtttegatt
tecgatttee geggaacega gtecegege geggeagage cageacagee agegegeeat
ggcggacccg gaggtgtgct gcttcatcac caaaatcctg tgcgcccacg ggggccgcat
300
ggccctggac gcgctgctcc aggagatcgc gctgtctgag ccgcagctct gtgaggtgct
gcaggtggcc gggcccgacc gctttgtggt gttggagacc ggcggcgagg ccgggatcac
ccgatcggtg gtggccacca ctcgagcccg ggtctgccgt cgcaagtact gccagagacc
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ctgcgataac ctgcatctct gcaaactcaa cttgctgggc cggtgcaact attcgcagtc
cgagcggaat ttatgcaaat attctcatga ggttctctca gaagagaact tcaaagtcct
gaaaaatcac gaactctctg gactgaacaa agaggaatta gcagtgctcc tcctccaaag
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696
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<211> 165
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<213> Homo sapiens
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Met Gln Val Ile Ala Gly Ser Leu Ala Val Leu Ala Thr Ala Asp Pro
                                    10
Gly Ser Ser Gly Gly His His Arg Ser Gly Asp Pro Gly Leu Ala Ala
                                25
Gly Leu Gln His His Lys Ala Val Gly Pro Gly His Leu Gln His Leu
                            40
Thr Glu Leu Arg Leu Arg Gln Arg Asp Leu Leu Glu Gln Arg Val Gln
                                            60
Gly His Ala Ala Pro Val Gly Ala Gln Asp Phe Gly Asp Glu Ala Ala
                    70
His Leu Arg Val Arg His Gly Ala Leu Ala Val Leu Ala Leu Pro Arg
                                    90
Arg Gly Thr Arg Phe Arg Gly Asn Arg Lys Ser Lys Leu Thr Ser Val
                                105
            100
Gln Gly Arg Ala Arg Ala Val Leu Leu Gly Ala Pro Gly Val Ser
                            120
Glu Gly Ala Leu Ser Val Ala Val Ser Pro Ala Gln Arg Ser Thr Leu
                        135
                                            140
Gly Ser Gln Val Lys Arg Leu Asp Leu Thr Asp Arg Val Leu Val Ala
                                                             160
                                        155
Gly Leu Gln Pro Ala
                165
<210> 3947
<211> 400
<212> DNA
<213> Homo sapiens
<400> 3947
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atcaccttcc tgcagcctgt ggtgaatgga gagctgacca tgctgggaga gatcacccac
ctgcagggca tcatcgacga cttggtggtg ctgacagcag aaccccacaa actgcctccc
gccagcgagc aggtaatcaa agacctaaag ggctcggact acagctggtc ctaccagacc
ccaccetcat cacceageag etecagetee eggaagteea geatgtgeag tgeeceeage
300
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acccagttcc acctgtcgct accgcagcct ggcgcagcca
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<210> 3948
<211> 133
<212> PRT
<213> Homo sapiens
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Xaa Glu Lys Gln Ala Ile Leu Leu Ala Leu Ile Glu Glu Arg Gly Arg
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Phe Cys Thr Phe Ile Thr Phe Leu Gln Pro Val Val Asn Gly Glu Leu
                                25
Thr Met Leu Gly Glu Ile Thr His Leu Gln Gly Ile Ile Asp Asp Leu
                            40
Val Val Leu Thr Ala Glu Pro His Lys Leu Pro Pro Ala Ser Glu Gln
                        55
Val Ile Lys Asp Leu Lys Gly Ser Asp Tyr Ser Trp Ser Tyr Gln Thr
                    70
Pro Pro Ser Ser Pro Ser Ser Ser Ser Ser Arg Lys Ser Ser Met Cys
Ser Ala Pro Ser Ser Ser Ser Ser Ala Lys Gly Gly Ser Pro Met
                                105
Ala Trp Gly Cys Pro Asn Ile Leu Thr Gln Phe His Leu Ser Leu Pro
                            120
Gln Pro Gly Ala Ala
    130
<210> 3949
<211> 1462
<212> DNA
<213> Homo sapiens
<400> 3949
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ccaccatett tetggetgea agagteaggg gteagaatgg ggggeageea ccaetgetga
aaagagttgg gggaggaacc cctgaaagga gagccagaaa tgggggagct ccaaactctt
tgtgtcagct ctgtccaaat ctctaactga cttgtgaact aaaaagaaag gtttctacca
300
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gtcacttcac agaaaaatat ataggtgctg ttttgccctq gaagccagac agatcaqaat
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caggcctgag aatcgccgaa cactgtccaa cacaatgtga tcacccaaca tatcacatgc
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atcactgage tgcaccacce ttttetteet cattgettte aagageteat acttatagtg
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<210> 3950
<211> 351
<212> PRT
<213> Homo sapiens
<400> 3950
Met Glu Ala Leu Leu Gln Ser Leu Val Ile Val Leu Leu Gly Phe Arg
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                                     10
Ser Leu Leu Ser Asp Gln Leu Gly Cys Glu Val Leu Asn Leu Leu Thr
Ala Gln Gln Tyr Glu Ile Phe Ser Arg Ser Leu Arg Lys Asn Arg Glu
Leu Phe Val His Gly Leu Pro Gly Ser Gly Lys Asn Ile Met Ala Met
Lys Ile Met Glu Lys Ile Arg Asn Val Phe His Cys Glu Ala His Arg
                     70
 Ile Leu Tyr Val Cys Glu Asn Gln Pro Leu Arg Asn Phe Ile Ser Asp
                85
                                     90
Arg Asn Ile Cys Arg Ala Glu Thr Arg Glu Thr Phe Leu Arg Glu Lys
                                 105
 Phe Glu His Ile Gln His Ile Val Ile Asp Glu Ala Gln Asn Phe Arg
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120
                                                125
Thr Glu Asp Gly Asp Trp Tyr Gly Lys Ala Lys Ser Ile Thr Gln Arg
                       135
                                            140
Glu Lys Asp Cys Pro Gly Val Leu Trp Ile Phe Leu Asp Tyr Phe Gln
                    150
                                        155
Thr Ser His Leu Gly His Ser Gly Leu Pro Pro Leu Ser Asp Gln Tyr
                                    170 .
Pro Arg Glu Glu Leu Thr Arg Ile Val Arg Asn Ala Asp Glu Ile Ala
                                185
Glu Tyr Leu Gln Lys Glu Met Gln Leu Ile Ile Glu Asn Pro Pro Ile
                            200
Asn Ile Pro Thr Gly Cys Leu Glu Val Phe Pro Glu Ala Glu Trp Ser
                        215
                                            220
Gln Gly Val Gln Gly Thr Leu Arg Ile Lys Lys Tyr Leu Thr Val Glu
                    230
                                        235
Gln Ile Met Thr Cys Val Ala Asp Thr Cys Arg Arg Phe Phe Asp Arg
                245
                                  - 250
Gly Tyr Ser Pro Lys Asp Val Ala Val Leu Val Ser Thr Ala Lys Glu
                                265
                                                    270
Val Glu His Tyr Lys Tyr Glu Leu Leu Lys Ala Met Arg Lys Lys Arg
                            280
Val Val Gln Leu Ser Asp Ala Cys Asp Met Leu Gly Asp His Ile Val
                        295
                                            300
Leu Asp Ser Val Arg Arg Phe Ser Gly Leu Glu Arg Ser Ile Val Phe
                    310
                                        315
Gly Ile His Pro Arg Thr Ala Asp Pro Ala Ile Leu Pro Asn Ile Leu
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                                    330
Ile Cys Leu Ala Ser Arg Ala Lys Gln His Leu Tyr Ile Phe Leu
                                345
<210> 3951
<211> 1012
<212> DNA
<213> Homo sapiens
<400> 3951
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Leu Gly Arg Gly Pro Leu Thr Gln Val Thr Asp Arg Lys Cys Ser Arg
Thr Gln Val Glu Leu Val Ala Asp Pro Glu Thr Arg Thr Val Ala Val
Lys Gln Val Ser Val Pro Leu Gln Gly Pro Ala Arg Pro Gly Asp Gly
Ile Trp Gly Gly Ile Ala Ser Arg Gln
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85

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Trp Pro Cys Ser Ser Ser Thr Gln Ala His Pro Gly Pro Leu His Leu
Pro Phe Ser Leu Ser Gly Asp Leu Pro Pro Ser Phe Lys Ser Leu His
                        55
Lys Gly His His Pro Met Ser Glu Gly Phe Ser Asp Tyr Pro Phe Pro
                    70 -
Ser Arg Ala Leu Pro Ser Met Leu His Phe Phe Pro Arg Ala Leu Asn
                                    90
Thr Thr Tyr Leu Ser Phe Ile Phe Ser Leu Ser Phe Phe Cys Leu Leu
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Pro Leu Glu His His Gln Ser Arg
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Ala Ser His Val Ser Lys Ala Val Cys Ser Thr Tyr Leu Gln Ser Arg
Tyr Tyr Arg Ala Pro Glu Ile Ile Leu Gly Leu Pro Phe Cys Glu Ala
Ile Asp Met Trp Ser Leu Gly Cys Val Ile Ala Glu Leu Phe Leu Gly
Trp Pro Leu Tyr Pro Gly Ala Ser Glu Tyr Asp Gln Ile Arg Tyr Ile
                                     90
Ser Gln Thr Gln Gly Leu Pro Ala Glu Tyr Leu Leu Ser Ala Gly Thr
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100
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Lys Thr Thr Arg Phe Phe Asn Arg Asp Thr Asp Ser Pro Tyr Pro Leu
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Trp Arg Leu Lys Thr Pro Asp Asp His Glu Ala Glu Thr Gly Ile Lys
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Ser Lys Glu Ala Arg Lys Tyr Ile Phe Asn Cys Leu Asp Asp Met Ala
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                    150
Gln Val Asn Met Thr Thr Asp Leu Glu Gly Ser Asp Met Leu Val Glu
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                                    170
Lys Ala Asp Arg Arg Glu Phe Ile Asp Leu Leu Lys Lys Met Leu Thr
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Ile Asp Ala Asp Lys Arg Ile Thr Pro Ile Glu Thr Leu Asn His Pro
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Phe Val Thr Met Thr His Leu Leu Asp Phe Pro His Ser Thr His Val
                                            220
                        215
Lys Ser Cys Phe Gln Asn Met Glu Ile Cys Lys Arg Arg Val Asn Met
                                        235
                    230
Tyr Asp Thr Val Asn Gln Ser Lys Thr Pro Phe Ile Thr His Val Ala
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                                    250
Pro Ser Thr Ser Thr Asn Leu Thr Met Thr Phe Asn Asn Gln Leu Thr
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Thr Val His Asn Gln Pro Ser Ala Ala Ser Met Ala Ala Ala Ala Gln
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Arg Ser Met Pro Leu Gln Thr Gly Thr Ala Gln Ile Cys Ala Arg Pro
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Asp Pro Phe Gln Gln Ala Leu Ile Val Cys Pro Pro Gly Leu Gln Ala
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Leu Gln Ala Ser Pro Phe Thr Arg
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Arg Glu Ser Leu Pro Leu His Ser Leu Pro Arg Asp Gly Ser Trp Gly
            20
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Leu Lys Gly Ala Trp Ala Ser Ala Ser Leu Gln Ala Ala Ser Asn Ser
Gln Ser Gly Phe Gly Cys Pro Gln Cys Ser Pro Glu Ala Ala Ala Pro
His Pro Thr Ile Leu Leu Arg Arg Leu Gly Ile Ile Gly Leu Pro
Trp Lys Gly Ser Ser Arg Arg Gly Leu Arg Glu Pro His Arg Cys Pro
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Leu Ala Cys Gln Thr
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<212> DNA
<213> Homo sapiens
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720
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Phe Leu His Pro Ser Glu Thr Ser Val Leu Asn Arg Leu Cys Arg Leu
                           40
Gly Thr Asp Tyr Ile Arg Phe Thr Glu Phe Ile Glu Gln Tyr Thr Gly
                       55 .
His Val Gln Gln Gln Asp His His Pro Ser Gln Gln Gly Gln Gly
                   70
                                       75<sup>-</sup>
Leu His Gly Ile Tyr Leu Arg Ala Phe Cys Thr Gly Leu Asp Ser Val
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Leu Gln Pro Tyr Arg Gln Ala Leu Leu Asp Leu Glu Gln Glu Phe Leu
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Gly Asp Pro His Leu Ser Ile Ser His Val Asn Tyr Phe Leu Asp Gln
                           120
Phe Gln Leu Leu Phe Pro Ser Val Met Val Val Glu Gln Ile Lys
                                           140
                        135
Ser Gln Lys Ile His Gly Cys Gln Ile Leu Glu Thr Val Tyr Lys His
                   150
                                       155
Ser Cys Gly Gly Leu Pro Pro Val Arg Ser Ala Leu Glu Lys Ile Leu
                                   170
Ala Val Cys His Gly Val Met Tyr Lys Gln Leu Ser Ala Trp Met Leu
                                185
His Gly Leu Leu Leu Asp Gln His Glu Glu Phe Phe Ile Lys Gln Gly
                           200
Pro Ser Ser Gly Asn Val Ser Ala Gln Pro Glu Glu Asp Glu Glu Asp
                                            220
                        215
Leu Gly Ile Gly Gly Leu Thr Gly Lys Gln Leu Arg Glu Leu Gln Asp
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                                       235
Leu Arg Leu Ile Glu Glu Glu Asn Met Leu Ala Pro Ser Leu Lys Gln
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Phe Ser Leu Arg Val Glu Ile Leu Pro Ser Tyr Ile Pro Val Arg Val
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Ala Glu Lys Ile Leu Phe Val Gly Glu Ser Val Gln Met Phe Glu Asn
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Ser Leu Val Asp Phe Glu Gln Val Val Asp Arg Ile Arg Ser Thr Val
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Ala Glu His Leu Trp Lys Leu Met Val Glu Glu Ser Asp Leu Leu Gly
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Gln Leu Lys Ile Ile Lys Asp Phe Tyr Leu Leu Gly Arg Gly Glu Leu
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Thr Ala Val Thr Glu His Asp Val Asn Val Ala Phe Gln Gln Ser Ala
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His Lys Val Leu Leu Asp Asp Asp Asn Leu Leu Pro Leu Leu His Leu
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Gly Trp Ala Ala Leu Gly Leu Ser Tyr Lys Val Gln Trp Pro Leu His
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Ile Leu Phe Thr Pro Ala Val Leu Glu Lys Tyr Asn Val Val Phe Lys
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Tyr Leu Leu Ser Val Arg Arg Val Gln Ala Glu Leu Gln His Cys Trp
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Ile Lys Trp Arg Leu Arg Asn His Met Ala Phe Leu Val Asp Asn Leu
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Gln Tyr Tyr Leu Gln Val Asp Val Leu Glu Ser Gln Phe Ser Gln Leu
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Leu His Gln Ile Asn Ser Thr Arg Asp Phe Glu Ser Ile Arg Leu Ala
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His Asp His Phe Leu Ser Asn Leu Leu Ala Gln Ser Phe Ile Leu Leu
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                                570
Lys Pro Val Phe His Cys Leu Asn Glu Ile Leu Asp Leu Cys His Ser
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Phe Cys Ser Leu Val Ser Gln Asn Leu Gly Pro Leu Asp Glu Arg Gly
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Leu Leu Phe Lys Ile Leu Ser Ser Val Arg Asn His Gln Ile Asn Ser
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Asp Leu Ala Gln Leu Leu Leu Arg Leu Asp Tyr Asn Lys Tyr Tyr Thr
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<212> DNA

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Leu Glu Gly Asp Lys Gln Leu Ile Arg Glu Thr Ser Thr His Gln Leu
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Arg	Lys	Arg	Tyr	Leu	Thr	Ile	Gly		Ser	Ser	Val	Lys		Lys	Lys
~1			100	<b>-</b>	<b>~</b> 1	ml	~7.	105	0	T7 -	<b>D</b> b -	<b>a</b> 1	110		
GIY	Asn	1yr	Leu	Leu	GIU	Thr	11e	ьуѕ	ser	116	Pne	125	GIII	Ser	261
Tvr	Glu		Leu	Lvs	Glu	Ile		Val	Val	Val	His		Ala	Asp	Phe
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Ala	His	His	Ile		Ala	Gly	Arg	Leu		Val	Ile	His	Ala		Glu
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Glu	Asp	Ara	Val	Lvs	Phe	Arq	Ser		Gln	Asn	Val	Asp		Ala	Phe
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Ser Ser Thr Ala 1155 Ser Leu Pro Gln 1170 Gln Tyr Ser Asn 1185 Leu Pro Glu Lys Pro Ala Phe Glu 122 Val Thr Val Lys 1235 Glu Asp Cys Arg	Ile Val P  O  Gln Ala L  Ser Pro M  Asn Ile S  1190  Ala Ser P  1205  Ala Ala G  C  Leu Lys P  Pro Leu A  His Ile V	inys Asn S 1160 let Arg G 175 ler Thr L Pro Pro A Sin Val G 1240 Lsn Lys L 1255	er Asn Asn 145 er Glu Asn flu Thr Pro eu Asp Val 1199 tla Ser Pro 1210 flu Ala Lys 225 eu Arg Ala bys Trp Arg	Lys Glu 1165 Ser Lys 1180 His Cys Pro Ile Pro Asp Val His 1245 Gly Met 1260 Thr Phe	Ile Leu Ty 1150 Ser Ile Pr Ala Phe H Leu Pro G 1215 Glu Leu Ly 1230 Gly Gly Pl Lys Trp Ly Lys Pro P	ro is ln 200 ro ys he
Ser Ser Thr Ala 1155 Ser Leu Pro Gln 1170 Gln Tyr Ser Asn 1185 Leu Pro Glu Lys Pro Ala Phe Glu 122 Val Thr Val Lys 1235 Glu Asp Cys Arg	Ile Val P  O  Gln Ala L  Ser Pro M  Asn Ile S  1190  Ala Ser P  1205  Ala Ala G  Leu Lys P	inys Asn S 1160 let Arg G 175 ler Thr L Pro Pro A Sin Val G 1240 Lsn Lys L 1255	er Asn Asn 145 er Glu Asn lu Thr Pro eu Asp Val 1199 la Ser Pro 1210 lu Ala Lys 225 eu Arg Ala	Lys Glu 1165 Ser Lys 1180 His Cys Pro Ile Pro Asp Val His 1245 Gly Met 1260 Thr Phe	Ile Leu Ty 1150 Ser Ile Pr Ala Phe H Leu Pro G 1215 Glu Leu Ly 1230 Gly Gly Pl Lys Trp Ly Lys Pro P	ro is ln 200 ro ys he
Ser Ser Thr Ala 1155 Ser Leu Pro Glm 1170 Gln Tyr Ser Asm 1185 Leu Pro Glu Lys Pro Ala Phe Glu 122 Val Thr Val Lys 1235 Glu Asp Cys Arg 1250 Lys Trp Ser Ile	Ile Val P 0 Clin Ala L Ser Pro M 1 Asn Ile S 1190 Ala Ser P 1205 Ala Ala G 0 Leu Lys P Pro Leu A 1 His Ile V	ys Asn S 1160 let Arg G 175 ler Thr L Pro Pro A Cln Val G 1240 lsn Lys L 1255 Val Ile P	er Asn Asn 145 er Glu Asn Flu Thr Pro Leu Asp Val 1199 Lla Ser Pro 1210 Flu Ala Lys 225 Leu Arg Ala Lys Trp Arg Pro Lys Gly 1279	Lys Glu 1165 Ser Lys 1180 His Cys Pro Ile Pro Asp Val His 1245 Gly Met 1260 Thr Phe	Ile Leu Ty 1150 Ser Ile Pr Ala Phe H: Leu Pro G. 1215 Glu Leu Ly 1230 Gly Gly Pl Lys Trp Ly Lys Pro Pr 125	ro is ln 2000 ro ys he ys
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Ser Ser Thr Ala 1155 Ser Leu Pro Gln 1170 Gln Tyr Ser Asn 1185 Leu Pro Glu Lys Pro Ala Phe Glu 122 Val Thr Val Lys 1235 Glu Asp Cys Arg 1250 Lys Trp Ser Ile 1265 Cys Glu Asp Glu Lys Pro Asp Pro 130	Ile Val P  O  Gln Ala L  Ser Pro M  1 Asn Ile S  1190  Ala Ser P  1205  Ala Ala G  C  Leu Lys P  Pro Leu A  1270  Ile Asp G  1285  Val Pro L	inys Asn S 1160 let Arg G 175 ler Thr L 200 Pro A Gln Val G 1240 len Lys L 255 lal Ile P Glu Phe L Lys Asp T	er Asn Asn 145 er Glu Asn Flu Thr Pro Leu Asp Val 1199 Lla Ser Pro 1210 Elu Ala Lys 225 Leu Arg Ala Lys Trp Arg Pro Lys Gly 1279 Lys Lys 1290 Eyr Arg Lys 305	Lys Glu 1165 Ser Lys 1180 His Cys Pro Ile Pro Asp Val His 1245 Gly Met 1260 Thr Phe Leu Gly Cys Cys	Ile Leu Ty 1150 Ser Ile Pr Ala Phe H: Leu Pro G. 1215 Glu Leu Ly 1230 Gly Gly Pl Lys Trp Ly Lys Pro Pr 1295 Phe Cys H: 1310	ro is ln 2000 ro ys he ys co 280 eu
Ser Ser Thr Ala 1155 Ser Leu Pro Gln 1170 Gln Tyr Ser Asn 1185 Leu Pro Glu Lys Pro Ala Phe Glu 122 Val Thr Val Lys 1235 Glu Asp Cys Arg 1250 Lys Trp Ser Ile 1265 Cys Glu Asp Glu Lys Pro Asp Pro 130 Glu Glu Gly Asp	Ile Val P  O  Gln Ala L  Ser Pro M  1 Asn Ile S  1190  Ala Ser P  1205  Ala Ala G  C  Leu Lys P  Pro Leu A  1270  Ile Asp G  1285  Val Pro L	inys Asn S 1160 det Arg G 175 der Thr L 2ro Pro A Gln Val G 1240 asn Lys L 255 Val Ile P Glu Phe L Lys Asp T Chr Asp G	er Asn Asn 145 er Glu Asn Flu Thr Pro Leu Asp Val 1199 Lla Ser Pro 1210 Elu Ala Lys 225 Leu Arg Ala Lys Trp Arg Pro Lys Gly 1279 Lys Lys 1290 Eyr Arg Lys 305	Lys Glu 1165 Ser Lys 1180 His Cys Pro Ile Pro Asp Val His 1245 Gly Met 1260 Thr Phe Leu Gly Cys Cys Arg Leu	Ile Leu Ty 1150 Ser Ile Pr Ala Phe H Leu Pro G 1215 Glu Leu Ly 1230 Gly Gly Pl Lys Trp Ly Lys Pro Pr 1295 Phe Cys H 1310 Leu Asn Leu	ro is ln 2000 ro ys he ys co 280 eu
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		139	5				140	0				140	5		
Cys			His	Lys	Pro	Lys	Gly	, Ile	His	Glบ	Gln	Glu	Leu	Ser	Tyr
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Phe	Ala	Val	Phe	Arg			Tyr	Val	Gln			Glu	Val	Arg	Gln
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Ile	Ala	Ser	Ile	Val	Gln	Arg	Gly	Glu			His	Thr	Phe	Arg	Val
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Gin	Ala			Ser	Pro	Lys			Phe	Pro	Val	Gly	Tyr	Glu	Ala
C	<b>3</b>	147		_	_		148				-	148			
ser	Arg	ьeu ^	Tyr	Trp	Ser			Tyr	Ala				Cys	Arg	Tyr
T 0	149		<b>-1</b> -	<b>63</b>	- 1	149					150	0			
150	- Cys		тте	GIU	GIU	туѕ	Asp	GIY	Arg			Phe	Val	Ile	Arg
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116	val	ĠIU	GIII	152	nis	Glu	Asp	Leu					Ile		
Lve	Glv	Val	Trn			T10	T	<b>~1</b>	153					153	5
<b>L</b> y 5	CLY	Val	154	v V	цуз	116	reu	154		vaı	Ата	Cys			Lys
Lvs	Ser	Glu			Gln	Leu	Dha			T1	T 011	T	155	0 - 21	
-1-		155	5				156		міа	TAT	Leu	156		GIU	Asp
Leu	Phe			Thr	Val	Ser			Δla	Δνα	Tla			C 0 74	T
	1570	)				157		• • • •	nia	ALG	158		GIU	361	Leu
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1585	;				159	0		-7-		159		- 7 -	GLy	ALG	1600
Pro	Leu	Met	Glu	Leu	Pro	Leu	Ala	Val	Asn			Glv	Cvs	Ala	Ara
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<b>3</b>	~1	7	1700		_	_		1705					1710		
Asn	GIU	vai	АТА	Asn	Arg	Lys			Leu	Tyr	Glu			Asn	Arg
C1	17-1	1715		Db -			1720		_	•		1725			
GIÀ	val	Tyr	met	Pne	Arg	Met		Asn	Asp	His			Asp	Ala	Thr
	1730 Th~		c1	D~~	<b>31</b> -	1735		_,	_		1740				
1745	- 11L	GIY	GIÀ	FIO		Arg	ryr	тте	Asn			Cys	Ala	Pro	
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Ser	Ser	Ser	Ara			G] n	Lvo	G1	1770		T 0	C	TL	1775	ጥ <sub>ህን</sub> -
				3			~ Y Y >	GIV	JLU	JIU	الاتاب	LVS	IVI	ASD	TVT

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1780

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	_		660		~ 7	-1	<b>*1</b> -	665	T	200	T 011	Tyc		T.eu	Glu
Ser	Val			Leu	GIU	GIU		Asp	гуу	Asn	neu	685	JCI	LCu	014
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705	) A c m	Arc	αla	Lvs			Glu	Phe	Met	Thr	Ser	Ile	Pro	Glu	Arg
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-	770	)				775	;				780				
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	850					855					860				
Leu	Cys	His	Gln	Gln	Gln	Leu	Gln	Asn	Pro	Ala	Glu	Glu	Gly	Met	Ser
865					870					875					880
Glu	Thr	Pro	Met	Leu	Pro	Ser	Ser	Leu	Met	Leu	Leu	Asn	Thr	Ala	His
				885					890					895	
Glu	Tyr	Leu	Gly	Arg	Arg	Ser	Trp	Cys	Cys	Asn	Ser	Asp	Gly	Ala	Leu
			900					905					910		
Leu	Arg	Phe	Tyr	Val	Arg	Val	Leu	Gln	Lys	Glu	Leu	Ala	Ala	Ser	Thr
		915			•		920					925			
Ser	Glu	Asp	Thr	His	Pro		Lys	Glu	Glu	Leu	Glu	Thr	Ala	Leu	Glu
-	930					935					940				
Gln	Cys	Phe	Tyr	Cys		Tyr	Ser	Phe	Pro		Lys	Lys	Ser	Lys	
945		_			950	<u></u> .				955	_	_ ^		_	960
Arg	Tyr	Leu	Glu		His	Ser	Ala	Gln		Val	Asp	Leu	Ile		Glu
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Ser			Lys	Val	Ser			Tle	GIn	Glv			Thr	Glu	Val
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		Leu	Pro	Glu			Asp	Pro	Ser			Val	Val	Asn	
	0,70			1045	-				1050					1055	
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	•	•	1060			-	-	1065		-		•	1070		
Lys	Ala	Ile	Lys	Phe	Tyr	Met	His	Asp	Ile	Cys	Ile	Cys	Pro	Asn	Arg
		1075	5				1080	)				1085	;		
Phe	Asp	Ser	Trp	Ala	Gly	Met	Ala	Leu	Ala	Arg	Ala	Ser	Arg	Ile	Gln
	1090					1095					1100				
Asp	Lys	Leu	Asn	Ser	Asn	Glu	Leu	Lys	Ser			Pro	Ile	Trp	
1105					1110					1115					1120
His	Ala	Thr	Pro			Asn	Cys	Phe	_	_	Ala	Leu	Glu		_
_	_	_	_	1125		_			1130				_	1135	
Ser	Ser	Asn	Leu		Leu	Trp	IIe			GIĀ	Thr	Met			Ala
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ьeu	HIS		Phe	Ala	ser	Arg			гÀг	GIN	Trp	_	_	GIU	Leu
Dwa	מאמ	1155	Leu	17-1		Cln	1160		GI v	λ	λ ×~	1165		Mo+	T 011
PIO	1170		Leu	Val	GIII	1179		GIU	GIY	AIG	1180	_	Ser	Mec	Leu
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1185		AIG	БyЗ	1113	1190		2111	561	AIG	1199		Cys	Gra	Gry	1200
		Glu	Glu	Glü			Tle	His	Tvr			Glv	Lvs	Val	
O <sub>1</sub>	nop	014	014	1209	-			*****	1210			0-1	2,0	1215	
Glu	Lvs	Gln	Gln			Pro	Thr	Val			Leu	His	Tvr		
	-7-		1220					1225					1230	_	
Ala	Glv	His	Tyr		His	Glu	Glu			Arg	Tvr	Pro	Lvs	Lvs	Ile
	2	1235	_				1240				- 4 -	1245		-1-	
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Phe			His	Ala				Lys	Leu	Leu	Gly	Lys	Pro	Asp	Ser
Phe 1265	Arg		His	Ala		Ile		Lys	Leu	Leu 1275	_	Lys	Pro	Asp	Ser 1280
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	1330	)				1335					1340				
Leu	Thr	Ser	Pro.	Pro	Tyr	Thr	Ala	Thr	Pro	Ile	Asp	His	Asp	Tyr	Val
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шуз	Cys	цуз	27.5	1365					1370		•	-	_	1375	;
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150 Ser	5 Arg	Phe	Pro	Gln 152!	151 His 5	0 Tyr	Lys	Ser	Leu 1530	1515 Tyr 0	Arg	Leu	Ala	Phe 153	1520 Leu 5
150 Ser	5 Arg	Phe		Gln 152!	151 His 5	0 Tyr	Lys	Ser	Leu 1530	1515 Tyr 0	Arg	Leu	Ala	Phe 1535 Asp	1520 Leu 5
150 Ser Tyr	5 Arg Thr	Phe Tyr	Pro Ser	Gln 152! Lys	1510 His 5 Thr	O Tyr His	Lys Arg	Ser Asn 1545	Leu 1530 Leu	1515 Tyr O Gln	Arg Trp	Leu Ala	Ala Arg	Phe 153! Asp	1520 Leu 5 Val
150 Ser Tyr	5 Arg Thr	Phe Tyr	Pro Ser	Gln 152! Lys	1510 His 5 Thr	O Tyr His	Lys Arg	Ser Asn 1545	Leu 1530 Leu	1515 Tyr O Gln	Arg Trp	Leu Ala	Ala Arg	Phe 153! Asp	1520 Leu 5 Val
150 Ser Tyr Leu	Arg Thr Leu	Phe Tyr Gly 155	Pro Ser 1540 Ser	Gln 152! Lys O Ser	1510 His 5 Thr	Tyr His Pro	Lys Arg Trp	Ser Asn 1549 Gln	Leu 1530 Leu Gln	1515 Tyr O Gln Leu	Arg Trp Gln	Leu Ala His 156	Ala Arg 1550 Met	Phe 1539 Asp O Pro	1520 Leu 5 Val Ala
150 Ser Tyr Leu	Arg Thr Leu	Phe Tyr Gly 155	Pro Ser 1540 Ser	Gln 152! Lys O Ser	1510 His 5 Thr	Tyr His Pro	Lys Arg Trp	Ser Asn 1549 Gln	Leu 1530 Leu Gln	1515 Tyr O Gln Leu	Arg Trp Gln	Leu Ala His 156	Ala Arg 1550 Met	Phe 1539 Asp O Pro	1520 Leu 5 Val Ala
150 Ser Tyr Leu	Arg Thr Leu Gly	Phe Tyr Gly 155 Leu	Pro Ser 1540 Ser	Gln 152! Lys O Ser	1510 His 5 Thr	Tyr His Pro	Lys Arg Trp 156 Asn	Ser Asn 1549 Gln	Leu 1530 Leu Gln	1515 Tyr O Gln Leu	Arg Trp Gln	Leu Ala His 156 Phe	Ala Arg 1550 Met	Phe 1539 Asp O Pro	1520 Leu 5 Val Ala
150 Ser Tyr Leu Gln	Arg Thr Leu Gly	Phe Tyr Gly 155 Leu	Pro Ser 1540 Ser S	Gln 152! Lys O Ser Cys	1510 His 5 Thr Ile Glu	Tyr His Pro Arg	Lys Arg Trp 156 Asn 5	Ser Asn 1545 Gln O Lys	Leu 1530 Leu Gln Thr	1515 Tyr O Gln Leu Asn	Arg Trp Gln Phe	Leu Ala His 156 Phe	Ala Arg 1556 Met 5 Asn	Phe 1539 Asp O Pro	1520 Leu 5 Val Ala Ile
150 Ser Tyr Leu Gln	Arg Thr Leu Gly 157 Arg	Phe Tyr Gly 155 Leu	Pro Ser 1540 Ser S	Gln 152! Lys O Ser Cys	1510 His 5 Thr Ile Glu Asp	Tyr His Pro Arg 157 Glu	Lys Arg Trp 156 Asn 5	Ser Asn 1545 Gln O Lys	Leu 1530 Leu Gln Thr	1515 Tyr O Gln Leu Asn	Arg Trp Gln Phe 158 Gly	Leu Ala His 156 Phe O Ser	Ala Arg 1556 Met 5 Asn	Phe 1539 Asp O Pro	1520 Leu 5 Val Ala
150 Ser Tyr Leu Gln Trp	5 Arg Thr Leu Gly 157 Arg	Phe Tyr Gly 155 Leu 0	Pro Ser 1540 Ser Ser Phe	Gln 152! Lys Ser Cys	1510 His Thr Ile Glu Asp 159	Tyr His Pro Arg 157 Glu	Lys Arg Trp 1566 Asn 5	Asn 1549 Gln U Lys	Leu 1530 Leu Gln Thr	1515 Tyr O Gln Leu Asn Pro	Arg Trp Gln Phe 158 Gly	Leu Ala His 156 Phe O Ser	Ala Arg 1550 Met S Asn Phe	Phe 153! Asp Pro Gly	1520 Leu 5 Val Ala Ile Trp 1600
150 Ser Tyr Leu Gln Trp	5 Arg Thr Leu Gly 157 Arg	Phe Tyr Gly 155 Leu 0	Pro Ser 1540 Ser Ser Phe	Gln 152: Lys Ser Cys Val	1510 His Thr Ile Glu Asp 159 Ile	Tyr His Pro Arg 157 Glu	Lys Arg Trp 1566 Asn 5	Asn 1549 Gln U Lys	Leu 1530 Leu Gln Thr Arg	1515 Tyr O Gln Leu Asn Pro 1599 Lys	Arg Trp Gln Phe 158 Gly	Leu Ala His 156 Phe O Ser	Ala Arg 1550 Met S Asn Phe	Phe 1539 Asp Pro Gly Ala Gln	1520 Leu 5 Val Ala Ile Trp 1600 Leu
150 Ser Tyr Leu Gln Trp 158 His	Arg Thr Leu Gly 157 Arg Met	Phe Tyr Gly 155 Leu 0 Ile	Pro Ser 1540 Ser Fhe Pro Arg	Gln 152: Lys Ser Cys Val Ser 160	1510 His Thr Ile Glu Asp 159 Ile	Tyr His Pro Arg 157 Glu 0 Val	Lys Arg Trp 156 Asn 5 Ile Leu	Ser Asn 1545 Gln O Lys Asp	Leu 1530 Leu Gln Thr Arg Leu 1610	1515 Tyr Gln Leu Asn Pro 1599 Lys	Arg Trp Gln Phe 158 Gly 5	Leu Ala His 156 Phe O Ser	Ala Arg 1550 Met 5 Asn Phe Ala	Phe 1539 Asp O Pro Gly Ala Gln 161	1520 Leu 5 Val Ala Ile Trp 1600 Leu 5
150 Ser Tyr Leu Gln Trp 158 His	Arg Thr Leu Gly 157 Arg Met	Phe Tyr Gly 155 Leu 0 Ile	Pro Ser 1540 Ser 5 Phe Pro Arg	Gln 152! Lys Ser Cys Val Ser 160	1510 His Thr Ile Glu Asp 159 Ile	Tyr His Pro Arg 157 Glu 0 Val	Lys Arg Trp 156 Asn 5 Ile Leu	Asn 1545 Gln Lys Asp Leu Val	Leu 1530 Leu 5 Gln Thr Arg Leu 1610 Ser	1515 Tyr Gln Leu Asn Pro 1599 Lys	Arg Trp Gln Phe 158 Gly 5	Leu Ala His 156 Phe O Ser	Ala Arg 1556 Met 5 Asn Phe Ala Gln	Phe 153: Asp O Pro Gly Ala Gln 161 Arg	1520 Leu 5 Val Ala Ile Trp 1600 Leu 5
150 Ser Tyr Leu Gln Trp 158 His	Arg Thr Leu Gly 157 Arg Met	Phe Tyr Gly 155 Leu O Ile Asn	Pro Ser 1540 Ser Fhe Pro Arg Ser 162	Gln 152! Lys Ser Cys Val Ser 160 Thr	1510 His Thr Ile Glu Asp 159 Ile 5	Tyr His Pro Arg 157 Glu 0 Val	Lys Arg Trp 156 Asn 5 Ile Leu Lys	Asn 1545 Gln Lys Asp Leu Val 1625	Leu 1530 Leu 5 Gln Thr Arg Leu 1610 Ser	1515 Tyr  Gln  Leu  Asn  Pro 1599 Lys  Ser	Arg Trp Gln Phe 158 Gly Val	Leu Ala His 156 Phe O Ser Leu	Ala Arg 1556 Met 5 Asn Phe Ala Gln 163	Phe 153: Asp O Pro Gly Ala Gln 161 Arg	1520 Leu 5 Val Ala Ile Trp 1600 Leu 5 Thr
150 Ser Tyr Leu Gln Trp 158 His	Arg Thr Leu Gly 157 Arg Met	Phe Tyr Gly 155 Leu O Ile Asn	Pro Ser 1540 Ser 5 Phe Pro Arg	Gln 152! Lys Ser Cys Val Ser 160 Thr	1510 His Thr Ile Glu Asp 159 Ile 5	Tyr His Pro Arg 157 Glu 0 Val	Lys Arg Trp 156 Asn 5 Ile Leu Lys	Asn 1549 Gln Lys Asp Leu Val 162 Arg	Leu 1530 Leu 5 Gln Thr Arg Leu 1610 Ser	1515 Tyr  Gln  Leu  Asn  Pro 1599 Lys  Ser	Arg Trp Gln Phe 158 Gly Val	Leu Ala His 156 Phe O Ser Leu Leu	Ala Arg 1550 Met 5 Asn Phe Ala Gln 163 Gln	Phe 153: Asp O Pro Gly Ala Gln 161 Arg	1520 Leu 5 Val Ala Ile Trp 1600 Leu 5 Thr
150 Ser Tyr Leu Gln Trp 158 His	Thr Leu Gly 157 Arg Met Asp	Phe Tyr Gly 155 Leu 0 Ile Asn His Gln 163	Pro Ser 1540 Ser Fhe Pro Arg Ser 162 Gly	Gln 152: Lys Ser Cys Val Ser 160 Thr O	1510 His Thr Ile Glu Asp 159 Ile 5 Leu	Tyr His Pro Arg 157 Glu Val Leu	Lys Arg Trp 156 Asn 5 Ile Leu Lys Leu 164	Asn 1545 Gln C Lys Asp Leu Val 1625 Arg	Leu 1530 Leu Gln Thr Arg Leu 1610 Ser	1515 Tyr  Gln  Leu  Asn  Pro 1599 Lys  Ser  Ala	Arg Trp Gln Phe 158 Gly Val Met Asp	Leu Ala His 156 Phe O Ser Leu Leu Arg 164	Ala Arg 1550 Met 5 Asn Phe Ala Gln 163 Gln 5	Phe 153! Asp Pro Gly Ala Gln 161 Arg O	1520 Leu 5 Val Ala Ile Trp 1600 Leu 5 Thr
150 Ser Tyr Leu Gln Trp 158 His	Thr Leu Gly 157 Arg Met Asp	Phe Tyr Gly 155 Leu 0 Ile Asn His Gln 163	Pro Ser 1540 Ser Fhe Pro Arg Ser 162 Gly	Gln 152: Lys Ser Cys Val Ser 160 Thr O	1510 His Thr Ile Glu Asp 159 Ile 5 Leu	Tyr His Pro Arg 157 Glu O Val Leu	Lys Arg Trp 156 Asn 5 Ile Leu Lys Leu 164	Asn 1545 Gln C Lys Asp Leu Val 1625 Arg	Leu 1530 Leu Gln Thr Arg Leu 1610 Ser	1515 Tyr  Gln  Leu  Asn  Pro 1599 Lys  Ser  Ala	Arg Trp Gln Phe 158 Gly Val Met Asp	Leu Ala His 156 Phe O Ser Leu Leu Arg 164	Ala Arg 1550 Met 5 Asn Phe Ala Gln 163 Gln 5	Phe 153! Asp Pro Gly Ala Gln 161 Arg O	1520 Leu 5 Val Ala Ile Trp 1600 Leu 5 Thr
Tyr Leu Gln Trp 158 His Arg	Thr Leu Gly 157 Arg Met Asp Asp	Phe Tyr 155 Leu 0 Ile Asn His Gln 163 Arg	Pro Ser 1540 Ser Fhe Pro Arg Ser 162 Gly Ala	Gln 152: Lys Ser Cys Val Ser 160 Thr O	1510 His Thr Ile Glu Asp 159 Ile Leu Lys	Tyr His Pro Arg 157 Glu Val Leu Tyr Leu 165	Lys Arg Trp 1566 Asn 5 Ile Leu Lys Leu 164 Thr	Asn 1549 Gln Lys Asp Leu Val 1629 Arg O	Leu 1530 Leu 5 Gln Thr Arg Leu 161 Ser 5 Asp	1515 Tyr  Gln  Leu  Asn  Pro 1599 Lys  Ser  Ala  Val	Arg Trp Gln Phe 158 Gly Val Met Asp	Leu Ala His 156 Phe 0 Ser Leu Arg 164 Glu 0	Ala Arg 1550 Met 5 Asn Phe Ala Gln 163 Gln 5 Asp	Phe 1539 Asp Pro Gly Ala Gln 161 Arg O Val	1520 Leu 5 Val Ala Ile Trp 1600 Leu 5 Thr
Tyr Leu Gln Trp 158 His Arg	Thr Leu Gly 157 Arg Met Asp Asp	Phe Tyr 155 Leu 0 Ile Asn His Gln 163 Arg	Pro Ser 1540 Ser Fhe Pro Arg Ser 162 Gly Ala	Gln 152: Lys Ser Cys Val Ser 160 Thr O	1510 His Thr Ile Glu Asp 159 Ile Leu Lys	Tyr His Pro Arg 157 Glu Val Leu Tyr Leu 165	Lys Arg Trp 1566 Asn 5 Ile Leu Lys Leu 164 Thr	Asn 1549 Gln Lys Asp Leu Val 1629 Arg O	Leu 1530 Leu 5 Gln Thr Arg Leu 161 Ser 5 Asp	1515 Tyr  Gln  Leu  Asn  Pro 1599 Lys  Ser  Ala  Val	Arg Trp Gln Phe 158 Gly Val Met Asp	Leu Ala His 156 Phe 0 Ser Leu Arg 164 Glu 0	Ala Arg 1550 Met 5 Asn Phe Ala Gln 163 Gln 5 Asp	Phe 1539 Asp Pro Gly Ala Gln 161 Arg O Val	1520 Leu 5 Val Ala Ile Trp 1600 Leu 5 Thr
150 Ser Tyr Leu Gln Trp 158 His Arg Pro	Thr Leu Gly 157 Arg Met Asp Asp Gln 165	Phe Tyr 155 Leu 0 Ile Asn His Gln 163 Arg	Pro Ser 1540 Ser Fhe Pro Arg Ser 162 Gly Ala	Gln 152: Lys Ser Cys Val Ser 160 Thr O	1516 His Thr Ile Glu Asp 159 Ile Lys Lys Ile	Tyr His Pro Arg 157 Glu Val Leu Tyr Leu 165	Lys Arg Trp 1566 Asn 5 Ile Leu Lys Leu 164 Thr	Asn 1549 Gln Lys Asp Leu Val 1629 Arg O	Leu 1530 Leu 5 Gln Thr Arg Leu 161 Ser 5 Asp	1515 Tyr  Gln  Leu  Asn  Pro 1599 Lys  Ser  Ala  Val	Trp Gln Phe 158 Gly Val Met Asp Leu 166 Pro	Leu Ala His 156 Phe 0 Ser Leu Arg 164 Glu 0	Ala Arg 1550 Met 5 Asn Phe Ala Gln 163 Gln 5 Asp	Phe 1539 Asp Pro Gly Ala Gln 161 Arg O Val	1520 Leu 5 Val Ala Ile Trp 1600 Leu 5 Thr Leu Leu
150 Ser Tyr Leu Gln Trp 158 His Arg Pro Ala Ser	Thr Leu Gly 157 Arg Met Asp Asp 165	Phe Tyr Gly 155 Leu 0 Ile Asn His Gln 163 Arg 0 Leu	Pro Ser 1540 Ser Fhe Pro Arg Ser 162 Gly Ala Ala	Gln 152: Lys Ser Cys Val Ser 160 Thr O Lys	1510 His Thr Ile Glu Asp 159 Ile Lys Lys Ile Gly 167	Tyr His Pro Arg 157 Glu 0 Val Leu Tyr Leu 165	Lys Arg Trp 156 Asn 5 Ile Leu Lys Leu 164 Thr 5	Asn 1549 Gln Lys Asp Leu Val 162 Arg Val Arg	Leu 1530 Leu 5 Gln Thr Arg Leu 1610 Ser 5 Asp Lys	1515 Tyr  Gln  Leu  Asn  Pro 1599 Lys  Ser  Ala  Val  Gly 167	Arg Trp Gln Phe 158 Gly Val Met Asp Leu 166 Pro 5	Leu Ala His 156 Phe 0 Ser Leu Arg 164 Glu 0 Lys	Ala Arg 1550 Met 5 Asn Phe Ala Gln 163 Gln 5 Asp	Phe 153! Asp Pro Gly Ala Gln 161 Arg Val Thr	1520 Leu 5 Val Ala Ile Trp 1600 Leu 5 Thr Leu Leu Gly 1680
150 Ser Tyr Leu Gln Trp 158 His Arg Pro Ala Ser	Thr Leu Gly 157 Arg Met Asp Asp 165	Phe Tyr Gly 155 Leu 0 Ile Asn His Gln 163 Arg 0 Leu	Pro Ser 1540 Ser Fhe Pro Arg Ser 162 Gly Ala Ala	Gln 152: Lys Ser Cys Val Ser 160 Thr O Lys Phe Glu	1510 His Thr Ile Glu Asp 159 Ile Lys Lys Ile Gly 167 Met	Tyr His Pro Arg 157 Glu 0 Val Leu Tyr Leu 165	Lys Arg Trp 156 Asn 5 Ile Leu Lys Leu 164 Thr 5	Asn 1549 Gln Lys Asp Leu Val 162 Arg Val Arg	Leu 1530 Leu Gln Thr Arg Leu 161 Ser S Asp Lys Pro	Tyr  Gln  Leu  Asn  Pro  1599  Lys  Ser  Ala  Val  Gly  167  Ser	Arg Trp Gln Phe 158 Gly Val Met Asp Leu 166 Pro 5	Leu Ala His 156 Phe 0 Ser Leu Arg 164 Glu 0 Lys	Ala Arg 1550 Met 5 Asn Phe Ala Gln 163 Gln 5 Asp	Phe 153! Asp Pro Gly Ala Gln 161 Arg Val Thr	1520 Leu 5 Val Ala Ile Trp 1600 Leu 5 Thr Leu Gly 1680 Pro
Tyr Leu Gln Trp 158 His Arg Pro Ala Ser 166 Leu	Thr Leu Gly 157 Arg Met Asp Asp Gln 165 Glu	Phe Tyr Gly 155 Leu 0 Ile Asn His Gln 163 Arg 0 Leu	Pro Ser 1540 Ser Phe Pro Arg Ser 162 Gly Ala Ala	Gln 152: Lys Ser Cys Val Ser 160 Thr O Lys Phe Glu Arg	1510 His Thr Ile Glu Asp 11e 5 Leu Lys Ile Gly 167 Met	Tyr His Pro Arg 157 Glu Val Leu Tyr Leu 165 Ser	Lys Arg Trp 156 Asn 5 Ile Leu Lys Leu 164 Thr 5 Glu	Asn 1549 Gln Lys Asp Leu Val 162 Arg Val Arg	Leu 1530 Leu 6 Gln Thr Arg Leu 161 Ser 5 Asp Lys Pro	Tyr  Gln  Leu  Asn  Pro  1599  Lys  Ser  Ala  Val  Gly  167  Ser  0	Trp Gln Phe 158 Gly Val Met Asp Leu 166 Pro 5	Leu Ala His 156 Phe 0 Ser Leu Leu Arg 164 Glu 0 Lys	Ala Arg 1550 Met S Asn Phe Ala Gln 163 Gln 5 Asp Val	Phe 153! Asp Pro Gly Ala Gln 161 Arg Val Thr Cys Ser 169	1520 Leu 5 Val Ala Ile Trp 1600 Leu 5 Thr Leu Gly 1680 Pro 5
Tyr Leu Gln Trp 158 His Arg Pro Ala Ser 166 Leu	Thr Leu Gly 157 Arg Met Asp Asp Gln 165 Glu	Phe Tyr Gly 155 Leu 0 Ile Asn His Gln 163 Arg 0 Leu	Pro Ser 1540 Ser Pro Pro Arg Ser 162 Gly Ala Ala Ala	Gln 152: Lys Ser Cys Val Ser 160 Thr O Lys Phe Glu Arg 168 Glu	1510 His Thr Ile Glu Asp 11e 5 Leu Lys Ile Gly 167 Met	Tyr His Pro Arg 157 Glu Val Leu Tyr Leu 165 Ser	Lys Arg Trp 156 Asn 5 Ile Leu Lys Leu 164 Thr 5 Glu	Asn 1549 Gln Lys Asp Leu Val 1629 Arg O Val Arg Asp	Leu 1530 Leu 5 Gln Thr Arg Leu 161 Ser 5 Asp Lys Pro Val 169 Pro	Tyr  Gln  Leu  Asn  Pro  1599  Lys  Ser  Ala  Val  Gly  167  Ser  0	Trp Gln Phe 158 Gly Val Met Asp Leu 166 Pro 5	Leu Ala His 156 Phe 0 Ser Leu Leu Arg 164 Glu 0 Lys	Ala Arg 1550 Met 5 Asn Phe Ala Gln 163 Gln 5 Asp Val Ala	Phe 1539 Asp Pro Gly Ala Gln 161 Arg Val Thr Cys Ser 169 Leu	1520 Leu 5 Val Ala Ile Trp 1600 Leu 5 Thr Leu Gly 1680 Pro
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Leu Ser Asp Ser Leu Gly Val Ser Val Met Ala Thr Asp Gln Asp Ser
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Tyr Ser Thr Ser Ser Thr Glu Glu Glu Leu Glu Gln Phe Ser Ser Pro
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Ser Val Lys Lys Pro Ser Met Ile Leu Gly Lys Ala Arg His Arg
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Leu Ser Phe Ala Ser Phe Ser Ser Met Phe His Ala Phe Leu Ser Asn
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Asn Arg Lys Leu Tyr Lys Lys Val Val Glu Leu Ala Gln Asp Lys Gly
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Ser Tyr Phe Gly Ser Leu Val Gln Asp Tyr Lys Val Tyr Ser Leu Glu
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Met Met Ala Arg Gln Thr Ser Ser Thr Glu Met Leu Gln Glu Ile Arg
                         135
                                             140
Thr Met Met Thr Gln Leu Lys Ser Tyr Leu Leu Gln Ser Thr Glu Leu
                                        155
                    150
Lys Ala Leu Val Asp Pro Ala Leu His Ser Glu Glu Glu Leu Glu Ala
                                    170
                165
Ile Val Glu Ser Ala Leu Tyr Lys Cys Val Leu Lys Pro Leu Lys Glu
                                                     190
                                185
Ala Ile Asn Ser Cys Leu His Gln Ile His Ser Lys Asp Gly Ser Leu
                                                 205
                             200
Gln Gln Leu Lys Glu Asn Gln Leu Val Ile Leu Ala Thr Thr Thr
                                             220
                         215
Asp Leu Gly Val Thr Thr Ser Val Pro Glu Val Pro Met Met Glu Lys
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235

230

Ile Leu Gln Lys Phe Thr Ser Met His Lys Ala Tyr Ser Pro Glu Lys

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250
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Lys Ile Ser Ile Leu Leu Lys Thr Cys Lys Leu Ile Tyr Asp Ser Met
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Ala Leu Gly Asn Pro Gly Lys Pro Tyr Gly Ala Asp Asp Phe Leu Pro
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Val Leu Met Tyr Val Leu Ala Arg Ser Asn Leu Thr Glu Met Leu Leu
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                                            300
Asn Val Glu Tyr Met Met Glu Leu Met Asp Pro Ala Leu Gln Leu Gly
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                                        315
Glu Gly Ser Tyr Tyr Leu Thr Thr Tyr Gly Ala Leu Glu His Ile
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                325
Lys Ser Tyr Asp Lys Ile Thr Val Thr Arg Gln Leu Ser Val Glu Val
                                345
Gln Asp Ser Ile His Arg Trp Glu Arg Arg Arg Thr Leu Asn Lys Ala
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Arg Ala Ser Arg Ser Ser Val Gln Asp Phe Ile Cys Val Ser Tyr Leu
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Glu Pro Glu Gln Gln Ala Arg Thr Leu Ala Ser Arg Ala Asp Thr Gln
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Ala Lys Pro Pro Val Ser Phe Phe Ser Leu Arg Ser Pro Val Leu Asp
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Leu Phe Gln Gly Gln Leu Asp Tyr Ala Glu Tyr Val Arg Arg Asp Ser
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Glu Val Val Leu Leu Phe Phe Tyr Ala Pro Trp Cys Gly Gln Ser Ile
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Ala Ala Arg Ala Glu Ile Glu Gln Ala Ala Ser Arg Leu Ser Asp Gln
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           100
Val Leu Phe Val Ala Ile Asn Cys Trp Trp Asn Gln Gly Lys Cys Arg
                           120
Lys Gln Lys His Phe Phe Tyr Phe Pro Val Ile Tyr Leu Tyr His Arg
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Ser Phe Gly Pro Ile Glu Tyr Lys Gly Pro His Glu Cys Cys Leu His
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cagccggatg atgaagaaga agatgaaact gctgaagaga gcttattgga aagtgatgtt
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gccatcaggc acatcagtgc tgaggtagtg cccatggggc ccccgccccc tccaaagccg
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Met Met Lys Ala Ala Ile Ser Glu Thr Glu Asp Met Pro Met Phe Glu
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Pro Lys Met Thr Arg Ser Lys Leu Lys Glu Val Val Glu Lys Gly Met
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Val Ile Pro Thr Trp Asn Ile Ser Pro Ile Lys Lys Ala Asn Glu Ile
                                        75
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Lys Pro Pro Gln Phe Val Asp Ile His Leu Glu Glu Asp Asp Ser Ser
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Asp Glu Glu Tyr Gln Pro Asp Asp Glu Glu Glu Asp Glu Thr Ala Glu
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                                                    110
Glu Ser Leu Leu Glu Ser Asp Val Glu Ser Thr Ala Ser Ser Pro Arg
                            120
                                                125
        115
Gly Ala Lys Lys Ser Arg Leu Arg Gln Ser Ser Glu Met Thr Glu Thr
                                            140
                        135
    130
Asp Glu Glu Ser Gly Ile Leu Ser Glu Ala Glu Lys Val Thr Thr Pro
                    150
                                        155
                                                            160
Ala Ile Arg His Ile Ser Ala Glu Val Val Pro Met Gly Pro Pro
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                                    170
Pro Pro Lys Pro Lys Gln Thr Arg Asp Ser Thr Phe Met Glu Lys Leu
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                                                    190
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His Ala Val Asp Glu Glu Leu Ala Ser Ser Pro Val Cys Met Asp Ser
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Phe Gln Pro Met Asp Asp Ser Leu Ile Ala Phe Arg Thr Arg
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cggagaatgg aaactgaaag tggaaatcag gaaaaggtaa tggaagaaga aagcactgaa
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780 gcagcaaaag	caattgagtt	tcttaacaac	ccaccagaag	aagcaccaag	aaaacctggc
840 atatttccta	aaacagtgaa	aaataagccc	attccagcct	taagagttgt	ggaagagaag
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1800 tggaaactcg	g agateettte	tggtgatcac	gaacaaaggt	: attggcagaa	gattttggtt
1860 gatagacagg	g caaaacttàa	a tcagcctcgg	gaaaagaaa	ı gaggcactga	aaagttaatc
1920					

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Ser Glu Ala Ser Lys Glu Asn Arg Asp Ile Glu Ile Ser Thr Glu Glu
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Glu Lys Asp Thr Gly Asp Leu Lys Asp Ser Ser Leu Leu Lys Thr Lys
                       55
Arg Lys His Lys Lys Lys His Lys Glu Arg His Lys Met Gly Glu Glu
                                       75
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Val Ile Pro Leu Arg Val Leu Ser Lys Ser Glu Trp Met Asp Leu Lys.
                                   90
Lys Glu Tyr Leu Ala Leu Gln Lys Ala Ser Met Ala Ser Leu Lys Lys
                               105
Thr Ile Ser Gln Ile Lys Ser Glu Ser Glu Met Glu Thr Asp Ser Gly
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Val Pro Gln Asn Thr Gly Met Lys Asn Glu Lys Thr Ala Asn Arg Glu
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Glu Cys Arg Thr Gln Glu Lys Val Asn Ala Thr Gly Pro Gln Phe Val
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Ser Gly Val Ile Val Lys Ile Ile Ser Thr Glu Pro Leu Pro Gly Arg
                                   170
               165
Lys Gln Val Arg Asp Thr Leu Ala Ala Ile Ser Glu Val Leu Tyr Val
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                               185
Asp Leu Leu Glu Gly Asp Thr Glu Cys His Ala Arg Phe Lys Thr Pro
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                           200
Glu Asp Ala Gln Ala Val Ile Asn Ala Tyr Thr Glu Ile Asn Lys Lys
                       215
His Cys Trp Lys Leu Glu Ile Leu Ser Gly Asp His Glu Gln Arg Tyr
                                       235
                   230
Trp Gln Lys Ile Leu Val Asp Arg Gln Ala Lys Leu Asn Gln Pro Arg
                                   250
                245
Glu Lys Lys Arg Gly Thr Glu Lys Leu Ile Thr Lys Ala Glu Lys Ile
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Arg Leu Ala Lys Thr Gln Gln Ala Ser Lys His Ile Arg Phe Ser Glu
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Tyr Asp
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Met Gln Ala Ser Val Pro Gly Pro Ser Glu Glu Pro Val Val Tyr Asn
                            40
Pro Thr Thr Ala Ala Phe Ile Cys Asp Ser Leu Val Asn Glu Lys Thr
                        55
Ile Gly Ser Pro Pro Asn Glu Phe Tyr Cys Ser Glu Asn Thr Ser Val
                                        75
                    70
Pro Asn Glu Ser Asn Lys Ile Leu Val Asn Lys Asp Val Pro Gln Lys
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90
Pro Gly Gly Glu Thr Thr Pro Ser Val Thr Asp Leu Leu Asn Tyr Phe
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            100
Leu Ala Pro Glu Ile Leu Thr Gly Asp Asn Gln Tyr Tyr Cys Glu Asn
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                            120
Cys Ala Ser Leu Gln Asn Ala Glu Lys Thr Met Gln Ile Thr Glu Glu
                                            140
                       135
Pro Glu Tyr Leu Ile Leu Thr Leu Leu Arg Phe Ser Tyr Asp Gln Lys
                    150
                                        155
Tyr His Val Arg Arg Lys Ile Leu Asp Asn Val Ser Leu Pro Leu Val
                165
                                    170
Leu Glu Leu Pro Val Lys Arg Ile Thr Ser Phe Ser Ser Leu Ser Glu
                                185
Ser Trp Ser Val Asp Val Asp Phe Thr Asp Leu Ser Glu Asn Leu Ala
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Lys Lys Leu Lys Pro Ser Gly Thr Asp Glu Ala Ser Cys Thr Lys Leu
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                        215
Val
225
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Ala Ser Leu Glu Ser Ala Pro Arg Ile Met Arg Leu Val Ala Glu Cys
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Ser Arg Ser Arg Ala Arg Ala Gly Glu Leu Trp Leu Pro His Gly Thr
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Val Ala Thr Pro Val Phe Met Pro Val Gly Thr Gln Ala Thr Met Lys
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Gly Ile Thr Thr Glu Gln Leu Asp Ala Leu Gly Cys Arg Ile Cys Leu
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Gly Asn Thr Tyr His Leu Gly Leu Arg Pro Gly Pro Glu Leu Ile Gln
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Lys Ala Asn Gly Leu His Gly Phe Met Asn Trp Pro His Asn Leu Leu
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Thr Leu Cys Gly Gly Val Ser Leu Asp Ser Gly Gly Phe Gln Met Val
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 Ser Leu Val Ser Leu Ser Glu Val Thr Glu Glu Gly Val Arg Phe Arg
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 Ser Pro Tyr Asp Gly Asn Glu Thr Leu Leu Ser Pro Glu Lys Ser Val
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                    150
 Gln Ile Gln Asn Ala Leu Gly Ser Asp Ile Ile Met Gln Leu Asp Asp
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                165
· Val Val Ser Ser Thr Val Thr Gly Pro Arg Val Glu Glu Ala Met Tyr
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 Arg Ser Ile Arg Trp Leu Asp Arg Cys Ile Ala Ala His Gln Arg Pro
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 Asp Lys Gln Asn Leu Phe Ala Ile Ile Gln Gly Gly Leu Asp Ala Asp
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 Leu Arg Ala Thr Cys Leu Glu Glu Met Thr Lys Arg Asp Val Pro Gly
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235

225

230

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Arg Met Val Ala Leu Ser Thr Ser Arg Leu Pro Lys Asp Lys Pro Arg
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Tyr Leu Met Gly Val Gly Tyr Ala Thr Asp Leu Val Val Cys Val Ala
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Leu Gly Cys Asp Met Phe Asp Cys Val Phe Pro Thr Arg Thr Ala Arg
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Phe Gly Ser Ala Leu Val Pro Thr Gly Asn Leu Gln Leu Arg Lys Lys
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                                        315
Val Phe Glu Lys Asp Phe Gly Pro Ile Asp Pro Glu Cys Thr Cys Pro
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                325
Thr Cys Gln Lys His Ser Arg Ala Phe Leu His Ala Leu Leu His Ser
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Asp Asn Thr Ala Ala Leu His His Leu Thr Val His Asn Ile Ala Tyr
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Gln Leu Gln Leu Met Ser Ala Val Arg Thr Ser Ile Val Glu Lys Arg
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                        375
Phe Pro Asp Phe Val Arg Asp Phe Met Gly Ala Met Tyr Gly Asp Pro
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Thr Leu Cys Pro Thr Trp Ala Thr Asp Ala Leu Ala Ser Val Gly Ile
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Thr Leu Gly
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Thr	Thr			Ile	Пе	тте			met	Asp	ьys			val	Thr
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LYS	PTO	val	. GIU	. ryr	Leu	ASI	. АŞП	PIO	тте	тте	1111	GILL	FILE	FIIC	Pro

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Met	Trp	Lys	Thr	Leu	Ser	Lvs	Leu	Ala	Len		Δla	Δτα	Gln	T.e.ii	
		•		565		7-			570			9	٠٠٠	575	1113
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Glv	Glv			Thr	Asp	Phe		Gln	Val	Δνα	בומ		Lou	ת 1 ת	Mot
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		870			875					880
865 Met Tyr Thr	Gln Ala		ra Trn	Glu Glu		ніс	Lve	T.en	Δla	
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Lys Cys Met		Glu As	sp Val			Tvr	Tle	Thr		Ala
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Lys Leu Tyr	Asp Asp			Leu Vai	lGlv	-	His	His	Pro	Asp
945		950	5		955	-1-				960
Leu Leu Ser	Asp Thr		eu His	Leu Gl		Glu	Leu	Glu	Ala	Glu
	965			97					975	
Gly Arg Leu	Gln Glu	Ala G	lu Tyr	His Ty	c Leu	Glu	Ala	Gln	Glu	Trp
	980		-	985				990		
Lys Ala Thr	Val Asn	Met Ty	yr Arg	Ala Se	Gly	Leu	Trp	Glu	Glu	Ala
995	•		1000				1005			
Tyr Arg Val	Ala Arg	Thr G	ln Gly	Gly Ala	a Asn	Ala	His	Lys	His	Val
1010			015	•		1020				
Ala Tyr Leu	Trp Ala	Lys Se	er Leu	Gly Gl	y Glu	Ala	Ala	Val	Arg	Leu
1025		1030			1039					1040
Leu Asn Lys	Leu Gly	Leu Le	eu Glu	Ala Ala	a Val	Asp	His	Ala	Ala	Asp
	104			10					1055	
Asn Cys Ser	Phe Glu	Phe A	la Phe		ı Ser	Arg	Leu			Lys
	1060	_		1065	_			1070		_
His Lys Thr		Val H			r Ala	Met			Glu	Asp
107			1080				1085			_
Glu Gly Lys	Phe Glu			Ala Gl	ı Phe			Ala	GIA	Lys
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Ala Gln Arg		Glu A	la His	_		Ser	vaı	Ala		
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	112 Gln Ala	Glu A		11: Leu Gl	30			Phe	1139 Gln	5
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Ala Gln Arg Leu Val Gly Ala Glu Gly	112 Gln Ala 1140 Leu Leu	Glu A 5 Arg G	ly Ala	Leu Gli 1145 Gln Arg	30 u Glu	Lys	Asp Leu	Phe 1150 Ala	1139 Gln )	Lys
Ala Gln Arg Leu Val Gly Ala Glu Gly 115	112 Gln Ala 1140 Leu Leu 5	Glu Ai 5 Arg Gi Leu Ai	ly Ala rg Ala 1160	Leu Glo 1145 Gln Arg	30 u Glu g Pro	Lys Gly	Asp Leu 1165	Phe 1150 Ala	1139 Gln ) Leu	Lys Asn
Ala Gln Arg Leu Val Gly Ala Glu Gly 1155 Tyr Tyr Lys	112 Gln Ala 1140 Leu Leu 5	Glu A 5 Arg G Leu A Gly L	ly Ala rg Ala 1160 eu Trp	Leu Glo 1145 Gln Arg	30 u Glu g Pro	Lys Gly Leu	Asp Leu 1165 Arg	Phe 1150 Ala	1139 Gln ) Leu	Lys Asn
Ala Gln Arg Leu Val Gly Ala Glu Gly 1150 Tyr Tyr Lys 1170	112 Gln Ala 1140 Leu Leu 5 Glu Ala	Glu A 5 Arg G Leu A Gly L	ly Ala rg Ala 1160 eu Trp 175	Leu Glo 1145 Gln Arg Ser As	30 u Glu g Pro p Ala	Lys Gly Leu 1180	Asp Leu 1165 Arg	Phe 1150 Ala Ile	1139 Gln ) Leu Cys	Lys Asn Lys
Ala Gln Arg Leu Val Gly Ala Glu Gly 115: Tyr Tyr Lys 1170 Asp Tyr Val	112 Gln Ala 1140 Leu Leu 5 Glu Ala	Glu A 5 Arg G Leu A Gly L Gln L	ly Ala rg Ala 1160 eu Trp 175	Leu Glo 1145 Gln Arg Ser As	30 u Glu g Pro p Ala u Gln	Lys Gly Leu 1180 Glu	Asp Leu 1165 Arg	Phe 1150 Ala Ile	1139 Gln ) Leu Cys	Lys Asn Lys
Ala Gln Arg Leu Val Gly Ala Glu Gly 115: Tyr Tyr Lys 1170 Asp Tyr Val 1185	112 Gln Ala 1140 Leu Leu 5 Glu Ala Pro Ser	Glu A 5 Arg G Leu A Gly L Gln L 1190	ly Ala rg Ala 1160 eu Trp 175 eu Glu	11: Leu Gl 1145 Gln Arg Ser As	30 u Glu g Pro p Ala u Gln 1199	Lys Gly Leu 1180 Glu	Asp Leu 1165 Arg Glu	Phe 1150 Ala Ile Tyr	Gln  Leu  Cys  Glu	Lys Asn Lys Arg
Ala Gln Arg Leu Val Gly Ala Glu Gly 115: Tyr Tyr Lys 1170 Asp Tyr Val	Gln Ala 1140 Leu Leu 5 Glu Ala Pro Ser	Glu A  Arg G  Leu A  Gly L  Gln L  1190 Gly A	ly Ala rg Ala 1160 eu Trp 175 eu Glu	11: Leu Gl 1145 Gln Arg Ser As	30 u Glu g Pro o Ala u Gln 1199 l Glu	Lys Gly Leu 1180 Glu	Asp Leu 1165 Arg Glu	Phe 1150 Ala Ile Tyr	Gln  Leu  Cys  Glu	Lys Asn Lys Arg 1200 Gln
Ala Gln Arg Leu Val Gly Ala Glu Gly 115: Tyr Tyr Lys 1170 Asp Tyr Val 1185 Glu Ala Thr	Gln Ala 1140 Leu Leu 5 Glu Ala Pro Ser Lys Lys 120	Glu A  Arg G  Leu A  Gly L  Gln L  1190  Gly A	ly Ala rg Ala 1160 eu Trp 175 eu Glu la Arg	11: Leu Glu 1145 Gln Arg Ser As Ala Leu Gly Va 12:	30 u Glu g Pro p Ala u Gln 1199 l Glu	Lys Gly Leu 1180 Glu Glu Gly	Asp Leu 1165 Arg Glu Phe	Phe 1150 Ala Ile Tyr	Cys Glu Glu 121	Lys Asn Lys Arg 1200 Gln
Ala Gln Arg Leu Val Gly Ala Glu Gly 115: Tyr Tyr Lys 1170 Asp Tyr Val 1185	Gln Ala 1140 Leu Leu 5 Glu Ala Pro Ser Lys Lys 120	Glu A  Arg G  Leu A  Gly L  Gln L  1190  Gly A	ly Ala rg Ala 1160 eu Trp 175 eu Glu la Arg	11: Leu Glu 1145 Gln Arg Ser As Ala Leu Gly Va 12:	30 u Glu g Pro p Ala u Gln 1199 l Glu	Lys Gly Leu 1180 Glu Glu Gly	Asp Leu 1165 Arg Glu Phe	Phe 1150 Ala Ile Tyr	Cys Glu Glu Glu 121! Asp	Lys Asn Lys Arg 1200 Gln
Ala Gln Arg Leu Val Gly Ala Glu Gly 115 Tyr Tyr Lys 1170 Asp Tyr Val 1185 Glu Ala Thr Ala Arg His	Gln Ala 1140 Leu Leu 5 Glu Ala Pro Ser Lys Lys 120 Trp Glu 1220	Glu A 5 Arg G Leu A Gly L Gln L 1190 Gly A 5 Gln A	ly Ala rg Ala 1160 eu Trp 175 eu Glu la Arg	Leu Glu 1145 Gln Arg Ser As Ala Le Gly Va 12 Glu Ty 1225	30 u Glu g Pro p Ala u Gln 1199 l Glu 10 r Ser	Lys Gly Leu 1180 Glu Gly Arg	Asp Leu 1165 Arg Glu Phe Ala	Phe 1150 Ala Ile Tyr Val Val 1230	Glu Cys Glu Glu 121! Asp	Lys Asn Lys Arg 1200 Gln Cys
Ala Gln Arg Leu Val Gly Ala Glu Gly 115: Tyr Tyr Lys 1170 Asp Tyr Val 1185 Glu Ala Thr	Gln Ala 1140 Leu Leu 5 Glu Ala Pro Ser Lys Lys 120 Trp Glu 1220 Val Arg	Glu A 5 Arg G Leu A Gly L Gln L 1190 Gly A 5 Gln A	ly Ala rg Ala 1160 eu Trp 175 eu Glu la Arg	11. Leu Glu 1145 Gln Arc Ser As Ala Le Gly Va 12. Glu Ty 1225 Asn Se	30 u Glu g Pro p Ala u Gln 1199 l Glu 10 r Ser	Lys Gly Leu 1180 Glu Gly Arg	Asp Leu 1165 Arg Glu Phe Ala	Phe 1150 Ala Ile Tyr Val Val 1230 Glu	Glu Cys Glu Glu 121! Asp	Lys Asn Lys Arg 1200 Gln Cys
Ala Gln Arg Leu Val Gly Ala Glu Gly 115: Tyr Tyr Lys 1170 Asp Tyr Val 1185 Glu Ala Thr Ala Arg His Tyr Leu Lys	Gln Ala  1140 Leu Leu  Glu Ala  Pro Ser  Lys Lys  120  Trp Glu  1220  Val Arg	Glu A  Arg G  Leu A  Gly L  Gln L  1190  Gly A  5  Gln A  Asp S	ly Ala rg Ala 1160 eu Trp 175 eu Glu la Arg la Gly er Gly 1240	Leu Glu 1145 Gln Arg Ser As Ala Le Gly Va 12 Glu Ty 1225 Asn Se	30 u Glu g Pro p Ala u Gln 1199 l Glu 10 r Ser	Lys Gly Leu 1180 Glu Gly Arg	Leu 1165 Arg Glu Phe Ala Ala 1245	Phe 1150 Ala Ile Tyr Val Val 1230 Glu	Cys Glu Glu 121! Asp Lys	Lys Asn Lys Arg 1200 Gln Cys
Ala Gln Arg Leu Val Gly Ala Glu Gly 115: Tyr Tyr Lys 1170 Asp Tyr Val 1185 Glu Ala Thr Ala Arg His Tyr Leu Lys 123:	Gln Ala  1140 Leu Leu  Glu Ala  Pro Ser  Lys Lys  120  Trp Glu  1220  Val Arg	Glu A  Arg G  Leu A  Gly L  Gln L  1190  Gly A  5  Gln A  Asp S  Glu L	ly Ala rg Ala 1160 eu Trp 175 eu Glu la Arg la Gly er Gly 1240	Leu Glu 1145 Gln Arg Ser As Ala Le Gly Va 12 Glu Ty 1225 Asn Se	30 u Glu g Pro p Ala u Gln 1199 l Glu 10 r Ser	Lys Gly Leu 1180 Glu Gly Arg	Asp Leu 1165 Arg Glu Phe Ala Ala 1245 Pro	Phe 1150 Ala Ile Tyr Val Val 1230 Glu	Cys Glu Glu 121! Asp Lys	Lys Asn Lys Arg 1200 Gln Cys
Ala Gln Arg Leu Val Gly Ala Glu Gly 115: Tyr Tyr Lys 1170 Asp Tyr Val 1185 Glu Ala Thr Ala Arg His Tyr Leu Lys 123 Trp Met Lys	Gln Ala 1140 Leu Leu 5 Glu Ala Pro Ser Lys Lys 120 Trp Glu 1220 Val Arg 5 Ala Ala	Glu A  Arg G  Leu A  Gly L  Gln L  1190  Gly A  S  Gln A  Asp S  Glu L	ly Ala rg Ala 1160 eu Trp 175 eu Glu la Arg la Gly er Gly 1240 eu Ser	Leu Glu 1145 Gln Arg Ser As Ala Leu Gly Va 12 Glu Ty 1225 Asn Se Ile Ly	30 u Glu g Pro p Ala u Gln 1199 l Glu 10 r Ser r Gly	Lys Gly Leu 1180 Glu Gly Arg Leu Leu 1260	Leu 1165 Arg Glu Phe Ala Ala 1245 Pro	Phe 1150 Ala Ile Tyr Val Val 1230 Glu Pro	Cys Glu Glu 121! Asp Lys Gln	Lys Asn Lys Arg 1200 Gln Cys Cys Arg
Ala Gln Arg Leu Val Gly Ala Glu Gly 115: Tyr Tyr Lys 1170 Asp Tyr Val 1185 Glu Ala Thr Ala Arg His Tyr Leu Lys 123: Trp Met Lys 1250	Gln Ala 1140 Leu Leu 5 Glu Ala Pro Ser Lys Lys 120 Trp Glu 1220 Val Arg 5 Ala Ala	Glu A  Arg G  Leu A  Gly L  Gln L  1190  Gly A  S  Gln A  Asp S  Glu L	ly Ala rg Ala 1160 eu Trp 175 eu Glu la Arg la Gly er Gly 1240 eu Ser	Leu Glu 1145 Gln Arg Ser As Ala Leu Gly Va 12 Glu Ty 1225 Asn Se Ile Ly	30 u Glu g Pro p Ala u Gln 1199 l Glu 10 r Ser r Gly	Lys Gly Leu 1180 Glu Gly Arg Leu 1260 Leu	Leu 1165 Arg Glu Phe Ala Ala 1245 Pro	Phe 1150 Ala Ile Tyr Val Val 1230 Glu Pro	Cys Glu Glu 121! Asp Lys Gln	Lys Asn Lys Arg 1200 Gln Cys Cys Arg
Ala Gln Arg Leu Val Gly Ala Glu Gly 115: Tyr Tyr Lys 1170 Asp Tyr Val 1185 Glu Ala Thr Ala Arg His Tyr Leu Lys 123: Trp Met Lys 1250 Asn Met Glu	Gln Ala 1140 Leu Leu 5 Glu Ala Pro Ser Lys Lys 120 Trp Glu 1220 Val Arg 5 Ala Ala	Glu A  Arg G  Leu A  Gly L  1190  Gly A  5  Gln A  Asp S  Glu L  1270	ly Ala rg Ala 1160 eu Trp 175 eu Glu la Arg la Gly er Gly 1240 eu Ser 255 la Val	Leu Gli 1145 Gln Arg Ser As Ala Lei Gly Va 122 Glu Ty 1225 Asn Se Ile Ly Gly Pre	30 u Glu g Pro p Ala u Gln 1199 l Glu 10 r Ser r Gly s Phe 0 Gln 1279	Lys Gly Leu 1180 Glu Gly Arg Leu 1260 Leu 5	Leu 1165 Arg Glu Phe Ala 1245 Pro	Phe 115(Ala Ile	Cys Glu Glu 121! Asp Lys Gln Ile	Lys Asn Lys Arg 1200 Gln Cys Cys Arg Gly 1280
Ala Gln Arg Leu Val Gly Ala Glu Gly 115: Tyr Tyr Lys 1170 Asp Tyr Val 1185 Glu Ala Thr Ala Arg His Tyr Leu Lys 123: Trp Met Lys 1250 Asn Met Glu 1265	Gln Ala 1140 Leu Leu 5 Glu Ala Pro Ser Lys Lys 120 Trp Glu 1220 Val Arg 5 Ala Ala	Glu A  Arg G  Leu A  Gly L  Gln L  1190  Gly A  S  Gln A  Asp S  Glu L  Leu A  1270  Ala G	ly Ala rg Ala 1160 eu Trp 175 eu Glu la Arg la Gly er Gly 1240 eu Ser 255 la Val	Leu Gli 1145 Gln Arg Ser As Ala Lei Gly Va 122 Glu Ty 1225 Asn Se Ile Ly Gly Pre	30 u Glu g Pro p Ala u Gln 1199 l Glu 10 r Ser r Gly s Phe 0 Gln 1279 u Asn	Lys Gly Leu 1180 Glu Gly Arg Leu 1260 Leu 5	Leu 1165 Arg Glu Phe Ala 1245 Pro	Phe 115(Ala Ile	Cys Glu Glu 121! Asp Lys Gln Ile	Lys Asn Lys Arg 1200 Gln Cys Cys Arg Gly 1280 Lys

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Arg	Val	Ala 131	-	Glu	Leu	Asp	Pro 1320	_	Tyr	Glu	Asp	Tyr 1329		Asp	Gln
His	Tyr 133		Glu	Phe	Leu	Lys 133		Gln	Gly	Lys	Val 1340	_	Ser	Leu	Val
<i>α</i> 1			**- 1	<b>71</b> -	<b>31</b> -		_	7	*	m			<b>~</b> 3 -	<b>~</b> 3	<b>61</b>
		ASD	vai	116	Ala		Leu	ASP	Leu	-		GIU	GIN	GIY	
134				_	1350		_	<b>.</b> .		135					1360
Trp	Asp	Lys	Cys	Ile	Glu	Thr	Ala	Thr	Lys	Gln	Asn	Tyr	Lys	Ile	Leu
				1365	5 .				137	0				1379	5
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Ser	Pro	Gly	Thr	Asn	Cys	Ala	Glu	Ala	Tyr	His	Ser	Trp	Ala	Asp	Leu
142	5				1430	)				1435	5				1440
Arg	Asp	Val	Leu	Phe	Asn	Leu	Ala	Val	Leu	Ser	Pro	Ser	Ser	Ser	Val
	_			1449					1450					1455	
Lvs	Thr	Trp	Lvs	Ser	Ser	Glu	Δla	Δsn			ala	Hie	Glu	Glu	Dhe
-10			1460					1469		110	ALU		1470		1110
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Lys	inr			ren	Ile	Ата			Tyr	АТА	inr			Ala	Ala
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ne u	Leu	Arg	His	Thr	Gln	Leu	Leu	Pro	Val	Asp	Lys	Ala	Phe	Tyr	Glu
150		Arg	His	Thr	Gln 1510		Leu	Pro	Val	Asp 1515	-	Ala	Phe	Tyr	Glu 1520
150	5				1510	)				1515	5			•	1520
150	5			Ala	1510 Lys	)			Trp	1515 Asp	5			Phe	1520 Ile
150: Ala	5 Gly	Ile	Ala	Ala 1525	1510 Lys	) Ala	Val	Gly	Trp 1530	1515 Asp	Asn	Met	Ala	Phe 1535	1520 Ile 5
150: Ala	5 Gly	Ile	Ala Arg	Ala 1525 Phe	1510 Lys	) Ala	Val	Gly Thr	Trp 1530 Asp	1515 Asp	Asn	Met	Ala Glu	Phe 1535 Gly	1520 Ile 5
150 Ala Phe	Gly Leu	Ile Asn	Ala Arg 1540	Ala 1525 Phe	1510 Lys Leu	Ala Asp	Val Leu	Gly Thr 1545	Trp 1530 Asp	1515 Asp ) Ala	Asn Ile	Met Glu	Ala Glu 1550	Phe 1535 Gly	1520 Ile Thr
150 Ala Phe	Gly Leu	Ile Asn Gly	Ala Arg 1540 Leu	Ala 1525 Phe	1510 Lys	Ala Asp	Val Leu Asp	Gly Thr 1545 Phe	Trp 1530 Asp	1515 Asp ) Ala	Asn Ile	Met Glu Asp	Ala Glu 1550 Ile	Phe 1535 Gly	1520 Ile Thr
1509 Ala Phe Leu	Gly Leu Asp	Ile Asn Gly 1555	Ala Arg 1540 Leu	Ala 1525 Phe ) Asp	1510 Lys Leu His	Ala Asp Ser	Val Leu Asp	Gly Thr 1549 Phe	Trp 1530 Asp Gln	1515 Asp ) Ala Asp	Asn Ile Thr	Met Glu Asp 1565	Ala Glu 1550 Ile	Phe 1535 Gly ) Pro	1520 Ile Thr
1509 Ala Phe Leu	Gly Leu Asp	Ile Asn Gly 1555	Ala Arg 1540 Leu	Ala 1525 Phe ) Asp	1510 Lys Leu	Ala Asp Ser	Val Leu Asp 1560	Gly Thr 1549 Phe	Trp 1530 Asp Gln	1515 Asp ) Ala Asp	Asn Ile Thr	Met Glu Asp 1565	Ala Glu 1550 Ile	Phe 1535 Gly ) Pro	1520 Ile Thr
1509 Ala Phe Leu	Gly Leu Asp	Ile Asn Gly 1555 Pro	Ala Arg 1540 Leu	Ala 1525 Phe ) Asp	1510 Lys Leu His	Ala Asp Ser	Val Leu Asp 1560	Gly Thr 1549 Phe	Trp 1530 Asp Gln	1515 Asp ) Ala Asp	Asn Ile Thr	Met Glu Asp 1565 Ala	Ala Glu 1550 Ile	Phe 1535 Gly ) Pro	1520 Ile Thr
1509 Ala Phe Leu Glu	Gly Leu Asp Val	Ile Asn Gly 1555 Pro	Ala Arg 1540 Leu Leu	Ala 1525 Phe Asp	1510 Lys Leu His	Ala Asp Ser Lys	Val Leu Asp 1560 Gln	Gly Thr 1545 Phe ) His	Trp 1530 Asp Gln Val	1515 Asp ) Ala Asp	Asn Ile Thr Glu 1580	Met Glu Asp 1565 Ala	Ala Glu 1550 Ile Glu	Phe 1535 Gly Pro Arg	1520 Ile Thr Phe
1509 Ala Phe Leu Glu	Gly Leu Asp Val 1570	Ile Asn Gly 1555 Pro	Ala Arg 1540 Leu Leu	Ala 1525 Phe Asp	1510 Lys Leu His	Ala Asp Ser Lys 1575	Val Leu Asp 1560 Gln	Gly Thr 1545 Phe ) His	Trp 1530 Asp Gln Val	1515 Asp ) Ala Asp	Asn Ile Thr Glu 1580 Asp	Met Glu Asp 1565 Ala	Ala Glu 1550 Ile Glu	Phe 1535 Gly Pro Arg	1520 Ile Thr Phe Glu Glu
150: Ala Phe Leu Glu Glu 158:	Gly Leu Asp Val 1570 Val	Asn Gly 1555 Pro Arg	Ala Arg 1540 Leu Leu Asp	Ala 1525 Phe Asp Pro	Lys Leu His Ala Val	Ala Asp Ser Lys 1575 Leu	Leu Asp 1560 Gln Thr	Thr 1545 Phe ) His	Trp 1530 Asp Gln Val Ser	Asp Ala Asp Pro Met 1595	Asn Ile Thr Glu 1580 Asp	Met Glu Asp 1565 Ala Gln	Ala Glu 1550 Ile Glu Arg	Phe 1535 Gly ) Pro Arg	1520 Ile Thr Phe Glu Glu 1600
150: Ala Phe Leu Glu Glu 158:	Gly Leu Asp Val 1570 Val	Asn Gly 1555 Pro Arg	Ala Arg 1540 Leu Leu Asp	Ala 1525 Phe Asp Pro Trp	Lys Leu His Ala Val 1590	Ala Asp Ser Lys 1575 Leu	Leu Asp 1560 Gln Thr	Thr 1545 Phe ) His	Trp 1530 Asp Gln Val Ser	Asp Ala Asp Pro Met 1595 Tyr	Asn Ile Thr Glu 1580 Asp	Met Glu Asp 1565 Ala Gln	Ala Glu 1550 Ile Glu Arg	Phe 1535 Gly Pro Arg Leu	1520 Ile Thr Phe Glu 1600 Val
Phe Leu Glu Glu 1589	Gly Leu Asp Val 1570 Val 6	Ile Asn Gly 1555 Pro Arg	Ala Arg 1540 Leu Leu Asp	Ala 1525 Phe Asp Pro Trp Arg 1605	Lys Leu His Ala Val 1590 Asp	Ala Asp Ser Lys 1575 Leu Glu	Val Leu Asp 1560 Gln Thr	Gly Thr 1549 Phe His Val	Trp 1530 Asp Gln Val Ser Ala 1610	Asp Asp Pro Met 1595 Tyr	Asn Ile Thr Glu 1580 Asp Glu	Met Glu Asp 1565 Ala Gln Ala	Ala Glu 1550 Ile Glu Arg Ser	Phe 1535 Gly Pro Arg Leu Leu 1615	1520 Ile Thr Phe Glu Glu 1600 Val
Phe Leu Glu Glu 1589	Gly Leu Asp Val 1570 Val 6	Ile Asn Gly 1555 Pro Arg	Ala Arg 1540 Leu Asp Pro	Ala 1525 Phe Asp Pro Trp Arg 1605 Gly	Lys Leu His Ala Val 1590	Ala Asp Ser Lys 1575 Leu Glu	Val Leu Asp 1560 Gln Thr	Thr 1545 Phe His Val Gly Leu	Trp 1530 Asp Gln Val Ser Ala 1610 Pro	Asp Asp Pro Met 1595 Tyr	Asn Ile Thr Glu 1580 Asp Glu	Met Glu Asp 1565 Ala Gln Ala	Ala Glu 1550 Ile Glu Arg Ser	Phe 1535 Gly Pro Arg Leu Leu 1615 Gly	1520 Ile Thr Phe Glu Glu 1600 Val
Phe Leu Glu Glu 1589 Gln Ala	Gly Leu Asp Val 1570 Val Val Ala	Ile Asn Gly 1555 Pro Arg Leu Ser	Ala Arg 1540 Leu Leu Asp Pro Thr 1620	Ala 1525 Phe Asp Pro Trp Arg 1605 Gly	Leu His Ala Val 1590 Asp	Ala Asp Ser Lys 1575 Leu Glu	Val Leu Asp 1560 Gln Thr Arg	Thr 1549 Phe His Val Gly Leu 1625	Trp 1530 Asp Gln Val Ser Ala 1610 Pro	Asp Ala Asp Pro Met 1595 Tyr Cys	Asn Ile Thr Glu 1580 Asp Glu Leu	Met Glu Asp 1565 Ala Gln Ala Ile	Ala Glu 1550 Ile Glu Arg Ser Thr 1630	Phe 1535 Gly Pro Arg Leu Leu 1615 Gly	1520 Ile Thr Phe Glu 1600 Val
Phe Leu Glu Glu 1589 Gln Ala	Gly Leu Asp Val 1570 Val Val Ala	Ile Asn Gly 1555 Pro Arg Leu Ser Leu	Ala Arg 1540 Leu Asp Pro Thr 1620 Arg	Ala 1525 Phe Asp Pro Trp Arg 1605 Gly	Lys Leu His Ala Val 1590 Asp	Ala Asp Ser Lys 1575 Leu Glu	Val Leu Asp 1560 Gln Thr Arg Ala Glu	Thr 1545 Phe His Val Gly Leu 1625 Phe	Trp 1530 Asp Gln Val Ser Ala 1610 Pro	Asp Ala Asp Pro Met 1595 Tyr Cys	Asn Ile Thr Glu 1580 Asp Glu Leu	Met Glu Asp 1565 Ala Gln Ala Ile	Ala Glu 1550 Ile Glu Arg Ser Thr 1630	Phe 1535 Gly Pro Arg Leu Leu 1615 Gly	1520 Ile Thr Phe Glu 1600 Val
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Phe Leu Glu Glu 1589 Gln Ala Pro Asn	Gly Leu Asp Val 1570 Val Val Ala Ile Lys 1650	Asn Gly 1555 Pro Arg Leu Ser Leu 1635 Asp	Ala Arg 1540 Leu Asp Pro Thr 1620 Arg Asn	Ala 1525 Phe Asp Pro Trp Arg 1605 Gly Asn	Leu His Ala Val 1590 Asp Val Lys	Ala Asp Ser Lys 1575 Leu Glu Arg Ile Lys 1655	Leu Asp 1560 Gln Thr Arg Ala Glu 1640 Phe	Thr 1545 Phe His Val Gly Leu 1625 Phe	Trp 1530 Asp Gln Val Ser Ala 1610 Pro Lys	Asp Asp Pro Met 1595 Tyr Cys Arg	Asn Ile Thr Glu 1580 Asp Glu Leu Pro Ile 1660	Met Glu Asp 1565 Ala Gln Ala Ile Gly 1645 Lys	Glu 1550 Glu Arg Ser Thr 1630 Lys	Phe 1535 Gly Pro Arg Leu 1615 Gly Ala	1520 Ile Thr Phe Glu 1600 Val Tyr Ala
Phe Leu Glu Glu 1589 Gln Ala Pro Asn Ser	Gly Leu Asp Val 1570 Val Val Ala Ile Lys 1650 Pro	Asn Gly 1555 Pro Arg Leu Ser Leu 1635 Asp	Ala Arg 1540 Leu Asp Pro Thr 1620 Arg Asn	Ala 1525 Phe Asp Pro Trp Arg 1605 Gly Asn	Leu His Ala Val 1590 Asp Val Lys Asn	Ala Asp Ser Lys 1575 Leu Glu Arg Ile Lys 1655 Val	Leu Asp 1560 Gln Thr Arg Ala Glu 1640 Phe	Thr 1545 Phe His Val Gly Leu 1625 Phe	Trp 1530 Asp Gln Val Ser Ala 1610 Pro Lys	Asp Asp Pro Met 1595 Tyr Cys Arg Ala	Asn Ile Thr Glu 1580 Asp Glu Leu Pro Ile 1660 Ser	Met Glu Asp 1565 Ala Gln Ala Ile Gly 1645 Lys	Glu 1550 Glu Arg Ser Thr 1630 Lys	Phe 1535 Gly Pro Arg Leu 1615 Gly Ala	1520 Ile Thr Phe Glu 1600 Val Tyr Ala His
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Phe Leu Glu Glu 1589 Gln Ala Pro Asn Ser 1669	Gly Leu Asp Val 1570 Val  Ala Ile Lys 1650 Pro 5	Asn Gly 1555 Pro Arg Leu Ser Leu 1635 Asp Val	Ala Arg 1540 Leu S Leu Asp Pro Thr 1620 Arg Asn Cys	Ala 1525 Phe Asp Pro Trp Arg 1605 Gly Asn Trp	Leu His Ala Val 1590 Asp Val Lys Asn Asp 1670 Ser	Ala Asp Ser Lys 1575 Leu Glu Arg Ile Lys 1655 Val	Leu Asp 1560 Gln Thr Arg Ala Glu 1640 Phe	Thr 1545 Phe His Val Gly Leu 1625 Phe Leu	Trp 1530 Asp Gln Val Ser Ala 1610 Pro Lys Met	Asp Asp Pro Met 1595 Tyr Cys Arg Ala Ile 1675	Asn Ile Thr Glu 1580 Asp Glu Leu Pro Ile 1660 Ser	Met Glu Asp 1565 Ala Gln Ala Ile Gly 1645 Lys	Glu 1550 Glu Arg Ser Thr 1630 Lys	Phe 1535 Gly Pro Arg Leu 1615 Gly Ala	1520 Ile Thr Phe Glu 1600 Val Tyr Ala His
Phe Leu Glu Glu 1589 Gln Ala Pro Asn Ser 1669	Gly Leu Asp Val 1570 Val  Ala Ile Lys 1650 Pro 5	Asn Gly 1555 Pro Arg Leu Ser Leu 1635 Asp Val	Ala Arg 1540 Leu S Leu Asp Pro Thr 1620 Arg Asn Cys	Ala 1525 Phe Asp Pro Trp Arg 1605 Gly Asn Trp Gln	Leu His Ala Val 1590 Asp Val Lys Asn Asp 1670 Ser	Ala Asp Ser Lys 1575 Leu Glu Arg Ile Lys 1655 Val	Leu Asp 1560 Gln Thr Arg Ala Glu 1640 Phe	Thr 1545 Phe His Val Gly Leu 1625 Phe Leu	Trp 1530 Asp Gln Val Ser Ala 1610 Pro Lys Met Phe	Asp Asp Pro Met 1595 Tyr Cys Arg Ala Ile 1675	Asn Ile Thr Glu 1580 Asp Glu Leu Pro Ile 1660 Ser	Met Glu Asp 1565 Ala Gln Ala Ile Gly 1645 Lys	Glu 1550 Glu Arg Ser Thr 1630 Lys	Phe 1535 Gly Pro Arg Leu 1615 Gly Ala	1520 Ile Thr Phe Glu 1600 Val Tyr Ala His

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Thr Gly Glu Lys Pro Tyr Glu Cys Asn Gln Cys Phe His Val Phe Arg
Thr Ser Cys Asn Leu Lys Ser His Lys Arg Ile His Thr Gly Glu Asn
His His Glu Cys Asn Gln Cys Gly Lys Ala Phe Ser Thr Arg Ser Ser
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Lys Glu Cys Gly Lys Thr Phe Met Tyr Asn Ser Ser Leu Ile Gln His
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110

105

100

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                                                 125
 Lys Ala Phe Arg Gln His Ser His Leu Val Thr His Gln Lys Ile His
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 Thr Gly Glu Lys Pro Tyr Gln Cys Thr Glu Cys Gly Lys Ala Phe Arg
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 Arg Arg Ser Leu Leu Ile Gln His Arg Arg Ile His Ser Gly Glu Lys
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                                     170
 Pro Tyr Glu Cys Lys Glu Cys Gly Lys Leu Phe Ile Trp Arg Thr Ala
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                                 185
                                                     190
 Phe Leu Lys His Gln Ser Leu His Ala Gly Glu Lys Leu Glu Glu Cys
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                             200
Glu Lys Xaa Pro Ser Ala Arg Met Arg Ser Leu Gly Glu Xaa Gln Lys
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 Ile His Gln Glu Glu Lys Ala Tyr Trp Cys Asn Gln Cys Gly Arg Ala
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Phe Gln Gly Ser Ser Asp Leu Ile Gly His Gln Val Thr His Thr Gly
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Glu Lys Pro Tyr Glu Cys Lys Glu Cys Gly Xaa Thr Phe Asn Gln Ser
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Lys Glu Leu Met Val His Val Gly Gly Leu Ile Gln Met Gly Cys Val
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Phe Gln Ser Thr Glu Val Lys His Val Thr Lys Val Glu Trp Ile Phe
Ser Gly Arg Arg Ala Lys Glu Glu Ile Val Phe Arg Tyr Tyr His Lys
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Leu Arg Met Ser Ala Glu Tyr Ser Gln Ser Trp Gly His Phe Gln Asn
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Arg Val Asn Leu Val Gly Asp Ile Phe Arg Asn Asp Gly Ser Ile Met
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Leu Gln Gly Val Arg Glu Ser Asp Gly Gly Asn Tyr Thr Cys Ser Ile
                           120
His Leu Gly Asn Leu Val Phe Lys Lys Thr Ile Val Leu His Val Ser
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                                           140
Pro Glu Glu Pro Arg Thr Leu Val Thr Pro Ala Ala Leu Arg Pro Leu
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                                       155
Val Leu Gly Gly Asn Gln Leu Val Ile Ile Val Gly Ile Val Cys Ala
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Thr Ile Leu Leu Pro Val Leu Ile Leu Ile Val Lys Lys Thr Cys
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           180
                               185
Gly Asn Lys Ser Ser Val Asn Ser Thr Val Leu Val Lys Asn Thr Lys
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Glu Gly Glu Val Asn Thr Arg Phe Ser Leu Lys His
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Val Arg Gly Ala Gln Arg Gly Gln His Ala Gly Arg Ala His Ser Ala
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                                            60
Ala Glu Asp Asp Ala Val Pro Gly Ala Gln Ser Arg His Arg Gln Cys
Gly Gly Pro Cys Trp Arg Ala Pro Pro Thr Trp Arg Cys Ser Gly Thr
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Ala Val Ser Arg Pro Ser Ser Ser Ala Lys Thr Trp Trp Arg Ser Pro
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Pro Arg Pro Ala Pro Xaa Pro Gly Val Pro Pro Pro Gly Ala Arg Leu
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Lys Leu Gln Lys Glu Arg Lys Val Phe Glu Lys Tyr Thr Thr Ala Ala
Arg Thr Phe Pro Asp Lys Lys Glu Arg Glu Glu Ile Gln Thr Leu Lys
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Gln Gln Ile Ala Asp Leu Arg Glu Asp Leu Lys Arg Lys Glu Thr Lys
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Trp Ser Ser Thr His Ser Arg Leu Arg Ser Gln Ile Gln Met Leu Val
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Arg Leu Asp Ala Trp Lys Arg Ala Glu Ala Ile Glu Ser Ser Leu Glu
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Val Glu Lys Lys Asp Lys Leu Ala Asn Thr Ser Val Arg Phe Gln Asn
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Ser Gln Ile Ser Ser Gly Thr Gln Val Glu Lys Tyr Lys Lys Asn Tyr
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Glu Lys Val Tyr Lys Asn Gly Cys Arg Val Ile Leu Phe Pro Asn Gly
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Thr Arg Lys Glu Val Ser Ala Asp Gly Lys Thr Ile Thr Val Thr Phe
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Phe Asn Gly Asp Val Lys Gln Val Met Pro Asp Gln Arg Val Ile Tyr
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Tyr Tyr Ala Ala Ala Gln Thr Thr His Thr Thr Tyr Pro Glu Gly Leu
Glu Val Leu His Phe Ser Ser Gly Gln Ile Glu Lys His Tyr Pro Asp
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Val Gln Arg Asp Gly Asn Lys Leu Ile Glu Phe Asn Asn Gly Gln Arg
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Leu Gly Gln Ala Ser Ser Ala Pro Val Gly Arg Leu Pro Arg Lys Thr
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Glu Asn Ser Lys Ser Ile Leu Glu Ser Tyr Leu Arg Tyr Lys His Ser
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Glu Pro His Ser Ser Val Gln Glu Ser Tyr Val Arg Asp Lys His Ser
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Cys Asp Glu Ser Gly Pro Arg Gln Pro Asp Gly Arg Gly Pro Ser
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aatgaattcc tcgagtacaa tcacgcagag tcagagcagg agtatgagga agagcaagaa 480

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Lys Glu Glu Leu Val Lys Lys Arg Ile Glu Leu Lys His Asp Lys Lys
Ala Arg Ala Met Ala Lys Arg Thr Lys Asp Asn Phe His Gly Tyr Asn
Gly Ile Pro Ile Glu Glu Lys Ser Lys Lys Arg Gln Ala Thr Glu Ser
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His Thr Ser Gln Gly Thr Asp Arg Glu Tyr Glu Met Glu Glu Glu Asn
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Glu Phe Leu Glu Tyr Asn His Ala Glu Ser Glu Gln Glu Tyr Glu Glu
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Glu Gln Glu Pro Pro Lys Val Glu Ser Lys Pro Lys Val Ser Leu Lys
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Lys Lys Gln Phe Glu Pro Val Glu Ile Lys Val Val Lys Lys Ser Glu
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Glu Arg Pro Met Thr Ala Glu Glu Leu Arg Glu Arg Glu Phe Leu Glu
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 Val Asn Gly Ser Thr Thr Ala Ile Cys Ala Thr Gly Leu Arg Asn Leu
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 Gly Asn Thr Cys Phe Met Asn Ala Ile Leu Gln Ser Leu Ser Asn Ile
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 Ile Leu Leu Cys Leu Gln Val Xaa Lys Cys Cys Ile Asn Gly Ala Ser
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 Thr Val Val Thr Ala Ile Phe Gly Gly Ile Leu Gln Asn Glu Val Asn
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 Cys Leu Ile Cys Gly Thr Glu Ser Arg Lys Phe Asp Pro Phe Leu Asp
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Pro Lys Val Leu Cys Leu His Leu Lys Arg Phe His Trp Thr Ala Tyr
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Leu Arg Asn Lys Val Asp Thr Tyr Val Glu Phe Pro Leu Arg Gly Leu
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Asp Met Lys Cys Tyr Leu Leu Asp Pro Glu Asn Ser Gly Pro Glu Ser
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Cys Leu Tyr Asp Leu Ala Ala Val Val His His Gly Ser Gly Val
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Gly Ser Gly His Tyr Thr Ala Tyr Ala Thr His Glu Gly Arg Trp Phe
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His Phe Asn Asp Ser Thr Val Thr Leu Thr Asp Glu Glu Thr Val Val
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Lys Val Tyr Val Gln Leu Trp Arg Leu Lys Ala Tyr Asn Arg Val
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Phe Ser Cys Asn Val Asn Thr Asp Ile Lys Asp Ala Val Val Pro
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Ile Val Ser Arg Asp Arg Lys Val Ser Pro Lys Ser Glu Phe Thr Ser
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Lys Ser Glu Ser Glu Val His Phe Asp Val Glu Thr Ala Ile Lys Val
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His Ala His His Glu Trp Tyr Leu Lys Ile Gln Leu Glu Asp Ile Lys
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Asn Tyr Gln Glu Ala Leu Arg Tyr Ile Gly Lys Leu Pro Phe Glu Gln
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Ala Glu Ser Asn Met Lys Arg Tyr Gly Lys Ile Leu Met His His Ile
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Leu		Thr	vai	GIU	ser		GIU	GIII	IYL	Deu	860	цуз	Mec	vuı	A.L.
_	850	_			Dh.	855	N	C	C	Dho		Dho	Val	λκα	Lare
	GIn	Trp	Tyr	Asp		ASD.	Arg	Ser	ser	875	val	FILE	vai	Y. A	880
865	_		~1	<b>~1</b> .	870	DL.	<b>-1</b> -	n	N		C1-5	uic	A cn	Dhe	
Leu	Arg	GIU	Gly		ASI	Pne	11e	Pne		птъ	GIII	птэ	ASD	895	ASP
_				885			-3-	~1	890	<b>3</b>	n1 -	T	mh		There
Glu	Asn	Gly	Ile	He	Tyr	Trp	IIe		Thr	ASI	АТА	гуѕ		Ala	ıyı
			900		_ •		_	905			••- 1	**- 3	910	C	C
Glu	Trp		Asn	Pro	Ala	Ala		GIY	Leu	vaı	vai		Inr	ser	ser
		915					920	_	_	_,	_	925	_		
Glu	Gly 930	_	Asn	Leu	Pro	Tyr 935	Gly	Arg	Leu	Glu	940	Ile	Leu	ser	Arg
Asp			Ala	Leu	Asn	Cys	His	Ser	Asn	Asp	Asp	Lys	Asn	Ala	Trp
945					950	•				955					960
Phe	Ala	Ile	Asp	Leu 965	Gly	Leu	Trp	Val	Ile 970		Ser	Ala	Tyr	Thr 975	Leu
7.20	uic	A1 =	Arg		Tyr	Glv	Ara	Ser			Arg	Asn	Trp	Val	Phe
ALG	mis	ATG	980		- 7 -	0-1		985			5		990		
Cl 5	1751	Sar	Lys		Glv	Gln	Asn		Thr	Ser	Leu	Tvr		His	Val
ĠŤII	vai	995		nop	011	02	100					100			
N cr	Λcn		Ser	T.611	Δen	Glu			Ser	Thr	Ala			Pro	Leu
ASP	101	-	Ser	Leu	ASII	101		017			102				
7.00			Lys	) Acn	Glu			Glv	Trp	Arσ			Ara	Ile	Lvs
102		FIU	цуз	nap	103		01	<b>U</b> _1		103			5		1040
Cln	Mat	Gly	Lys	Aen			Glv	Gln	Thr			Leu	Ser	Leu	Ser
GIII	Mec	GLY	цуз	104			017		105		-1-			105	
Glv	Dhe	Glu	T.e.11			Thr	Val	Asn			Cvs	Glu	Asp	Gln	Leu
GIY	FIIC	GIU	106	n - 7 -	017			106	5		-2-		107		
Ċ1.r	Tvc											Ara			Arg
GIY	цуз	107		шуз	OIU	ALG	108			200	3	108		5	5
7	17-1			C1 n	1/23	T an		-	Met	Wal	Pro		_	Ara	Val
Leu			ser	GIII	vai	109		172	Nec	vai	110			••••	
	109			•	<b></b>			7	7	C1 n			Sar	Dro	Gln
	-	GIY	ьeu	Asp			rrp	Arg	мэр			GIY	JEL	-10	Gln 1120
110	5	a.	m'		111		. <b>.</b>	T	tr= -	111		~~~	T1 ~	7	
Gly	Glu	GLY	Thr			GIA	GIU	ьeu			GIĀ	тър	116		
	_	_		112		_	_		113		M - +	<b>a</b> 1	. או	113	
Thr	Trp	Asp			Gly	ser	Asn			Arg	met	στУ			Gly
		-			_		_	114		_	_		115		<b>5</b> 7 -
Lys	Phe			Lys	Leu	Ala			Tyr	Asp	Pro			val	Ala
		115					116					116		_	_
Ser	Pro	Lys	Pro	Val	Ser	Ser	Thr	Val	Ser	Gly	Thr	Thr	Gln	Ser	Trp

		_					_								
	117					117					118				
Ser	Ser	Leu	Val	Lys	Asn	Asn	Cys	Pro	Asp	Lys	Thr	Ser	Ala	Ala	Ala
118					119	_				119					1200
Gly	Ser	Ser	Ser	Arg	Lys	Gly	Ser	Ser	Ser	Ser	Val	Cys	Ser	Val	Ala
				120	5				121	0			-	121	5
Ser	Ser	Ser	Asp	Ile	Ser	Leu	Gly	Ser	Thr	Lys	Thr	Glu	Arg	Arg	Ser
			122	0				122	5				123	0	
Glu	Ile	Val	Met	Glu	His	Ser	Ile	Val	Ser	Gly	Ala	Asp	Val	His	Glu
		123					124					124			
Pro	Ile	Val	Val	Leu	Ser	Ser	Ala	Glu	Asn	Val	Pro	Gln	Thr	Glu	Val
	125					125					126				
Gly	Ser	Ser	Ser	Ser	Ala	Ser	Thr	Ser	Thr	Leu	Thr	Ala	Glu	Thr	Gly
126					1270					127					1280
Ser	Glu	Asn	Ala	Glu	Arq	Lys	Leu	Gly	Pro	Asp	Ser	Ser	Val	Arg	
				128		•			129					129	
Pro	Gly	Glu	Ser	Ser	Ala	Ile					Val	Ser	Va 1		Ser
	. •		1300					130					131		
Pro	Asp	Val	Ser	Ser	Val	Ser	Glu			Asn	Lvs	Glu			Ser
	•	131					132				_,_	132			001
Gln	Arg			Ser	Ser	Ser			Asn	Arg	Len			Ser	Ser
	133					1335				5	134				301
Leu	Leu	Ala	Ala	Glv	Ala			Ser	Ser	Ser			Val	Pro	Asn
134				1	1350					1359		OCI	Val	110	1360
		Ser	Ara	Glu			Ser	T.en	Glu	Ser		Val	Ara	Δτα	
				1369					1370		1110	<b>V</b> 41	AL 9	1379	
Ala	Asn	Ile	Ala			Asn	Ala	Thr			Met	Δsn	T.011		Arg
			1380					138				71511	139		Arg
Ser	Ser	Ser			Asn	Thr	Asn			Gly	Ara	Asn			Ser
		1399					1400			017	****	140		1100	Ser
Thr	Ala			Pro	Leu	Met			Gln	Ser	Dhe			T.e.u	Thr
	1410					1415			·		1420			DCu	
Thr	Pro	Glv	Thr	Thr	Ser			Thr	Met	Ser			Ser	Val	Thr
1425		2			1430					1435		501	501	·u_	1440
Ser	Ser	Ser	Asn	Val			Ala	Thr	Thr			Ser	Val	Glv	Gln
				1445					1450				• • • •	1455	
Ser	Leu	Ser	Asn	Thr	Leu	Thr	Thr	Ser		Thr	Ser	Thr	Ser		
			1460					1469					1470		014
Ser	Asp	Thr	Gly	Gln	Glu	Ala	Glu			Leu	Tvr	Asp			Asp
	-	1479					1480				-1-	1489			
Ser	Cys	Arq	Ala	Ser	Thr	Leu	Leu	Ala	Glu	Leu	Asp			Glu	Asp
	1490					1495					1500				
Leu	Pro	Glu	Pro	Asp	Glu			Asp	Glu	Asn			Asp	Asn	Gln
1509					1510					1515					1520
		Gln	Glu	Tvr			Val	Met	Tle	Leu		Ara	Pro	Ser	
				1525					1530		****9	9		1535	
Gln	Ara	Ara	Ala			Ara	Ser	Δsn		Thr	uie	Hie	בומ		
·	9		1540		JCI	nr 9	JCI	1545		1111	птэ	nis	1550		1111
Ser	Gln	T.e.ii			Va l	Dro	αI =			Gly	c~~	7~~		-	C1
JCL	0111	1555		GIII	vai	FIO	1560		ALA	GIY	ser			116	GIÀ
<i>a</i> 1	Gla			C1	C1	T			T	<b>G</b> 1	<b>01</b> -	1565		•	
JIU	1570		GIU	GIU	GIU	19E		TIII.	гÀг	Gly	-	_	arg	arg	Inr
Trn			V C ~	Τι.~~	17 n 1			n	C1-	nk -	1580		T	17- 3	D
1585		vah	vsħ	TAT	1590		пÄR	Arg	GIU	Phe		мта	ren	val	
		7.00	Dro	n ~~			λ <b></b> -	m\	N	1595		~1·	ml	mı.	1600
VT a	E IIC	WO D	£ F O	M. U	FLU	OT A	ALU	1117	AST	VAI	La ID	1 - I T	1.11.1	Inr	460

	1.6	505				1610	,				1615	
Leu Glu Ile			C111					Clu	Leu	Leu		
neu Giu IIe		OPIO	GTÅ		1625		Ser	Gru	Deu	1630		O14
17-1 Gl. C.	1620		Dwa						T 011			Th~
Val Glu Cys		o ser	PIO			ALA	Leu	1111	1645		vai	1111
163			<b>01</b>	1640		·	<b>5</b>	<b>7</b>			Db.	N
Gly Leu Gly	Thr Tr	_			GIU	Leu	Pro			ASI	Pne	Arg
1650			1655		_	_	_	1660			<b></b>	<b>-</b>
Ser Thr Ile	Phe Ty	-		Gin	Lys	Leu			Leu	Ser	Cys	
1665		1670					1675		_			1680
Gly Asn Val	-		Lys	Leu	Arg			Trp	Glu	Pro		
		585				1690					1695	
Thr Ile Met	Tyr A	cg Glu	Met	Lys	Asp	Ser	Asp	Lys	Glu	Lys	Glu	Asn
	1700				1705					1710		
Gly Lys Met	Gly C	s Trp	Ser	Ile	Glu	His	Val	Glu	Gln	Tyr	Leu	Gly
171	.5			1720	)				1725	5		
Thr Asp Glu	Leu Pr	co Lys	Asn	Asp	Leu	Ile	Thr	Tyr	Leu	Gln	Lys	Asn
1730			1735					1740				
Ala Asp Ala	Ala Ph	ne Leu	Arg	His	Trp	Lys	Leu	Thr	Gly	Thr	Asn	Lys
1745		1750	<b>!</b>				1755	;				1760
Ser Ile Arg	Lys As	sn Arg	Asn	Cys	Ser	Gln	Leu	Ile	Ala	Ala	Tyr	Lys
	17	765				1770	)				1775	5
Asp Phe Cys	Glu Hi	is Gly	Thr	Lys	Ser	Gly	Leu	Asn	Gln	Gly	Ala	Ile
-	1780			_	1785					1790		
Ser Thr Leu	Gln Se	er Ser	Asp	Ile	Leu	Asn	Leu	Thr	Lys	Glu	Gln	Pro
179			-	1800					1809			
Gln Ala Lys	Ala G	lv Asn	Glv	Gln	Asn	Ser	Cys	Gly	Val	Glu	Asp	Val
1810			1815					1820			-	
Leu Gln Lei	Leu Ai				Ile	Val				Pro	Tyr	Ser
Leu Gln Lei	Leu Ar	rg Ile	Leu		Ile	Val	Ala	Ser		Pro	Tyr	
1825		rg Ile 1830	Leu	Tyr	-		Ala 1835	Ser	Asp			1840
	Gln Gl	rg Ile 1830 lu Asp	Leu	Tyr	-	Gln	Ala 1835 Pro	Ser	Asp		Phe	1840 Pro
1825 Arg Ile Ser	Gln Gl	rg Ile 1830 lu Asp 345	Leu Gly	Tyr Asp	Glu	Gln 1850	Ala 1835 Pro	Ser Gln	Asp Phe	Thr	Phe 1855	1840 Pro
1825	Gln Gl 18 Phe Th	rg Ile 1830 lu Asp 345	Leu Gly	Tyr Asp	Glu Ile	Gln 1850 Thr	Ala 1835 Pro	Ser Gln	Asp Phe	Thr Leu	Phe 1855 Gln	1840 Pro
1825 Arg Ile Ser Pro Asp Glu	Gln Gl 18 Phe Th 1860	rg Ile 1830 lu Asp 345 nr Ser	Leu Gly Lys	Tyr Asp Lys	Glu Ile 1865	Gln 1850 Thr	Ala 1835 Pro ) Thr	Ser Gln Lys	Asp Phe Ile	Thr Leu 1870	Phe 1855 Gln	1840 Pro Gln
1825 Arg Ile Ser Pro Asp Glu Ile Glu Glu	Gln Gl 18 Phe Th 1860	rg Ile 1830 lu Asp 345 nr Ser	Leu Gly Lys	Tyr Asp Lys Ala	Glu Ile 1865 Ser	Gln 1850 Thr	Ala 1835 Pro ) Thr	Ser Gln Lys	Asp Phe Ile Pro	Thr Leu 1870 Asp	Phe 1855 Gln	1840 Pro Gln
1825 Arg Ile Ser Pro Asp Glu Ile Glu Glu 183	Gln Gl 18 Phe Th 1860 Pro Le	rg Ile 1830 Lu Asp 345 nr Ser eu Ala	Leu Gly Lys Leu	Tyr Asp Lys Ala 1880	Glu Ile 1865 Ser	Gln 1850 Thr Gly	Ala 1835 Pro ) Thr	Ser Gln Lys Leu	Asp Phe Ile Pro 1885	Thr Leu 1870 Asp	Phe 1855 Gln Trp	1840 Pro Gln Cys
1825 Arg Ile Ser Pro Asp Glu Ile Glu Glu 183 Glu Gln Leu	Gln Gl 18 Phe Th 1860 Pro Le	rg Ile 1830 Lu Asp 345 nr Ser eu Ala	Leu Gly Lys Leu Cys	Tyr Asp Lys Ala 1880 Pro	Glu Ile 1865 Ser	Gln 1850 Thr Gly	Ala 1835 Pro ) Thr	Ser Gln Lys Leu Pro	Asp Phe Ile Pro 1885 Phe	Thr Leu 1870 Asp	Phe 1855 Gln Trp	1840 Pro Gln Cys
1825 Arg Ile Ser Pro Asp Glu Ile Glu Glu 183 Glu Gln Leu 1890	Gln Gl 18 1 Phe Th 1860 1 Pro Le 5 1 Thr Se	rg Ile 1830 lu Asp 345 nr Ser eu Ala	Leu Gly Lys Leu Cys 1895	Tyr Asp Lys Ala 1880 Pro	Glu Ile 1865 Ser ) Phe	Gln 1850 Thr Gly Leu	Ala 1835 Pro Thr Ala	Ser Gln Lys Leu Pro 1900	Asp Phe Ile Pro 1885 Phe	Thr Leu 1870 Asp Glu	Phe 1855 Gln Trp	1840 Pro Gln Cys
Pro Asp Glu  Ile Glu Glu  182  Glu Gln Leu  1890  Gln Leu Tyn	Gln Gl 18 1 Phe Th 1860 1 Pro Le 5 1 Thr Se	rg Ile 1830 lu Asp 345 nr Ser eu Ala er Lys	Leu Gly Lys Leu Cys 1895	Tyr Asp Lys Ala 1880 Pro	Glu Ile 1865 Ser ) Phe	Gln 1850 Thr Gly Leu	Ala 1835 Pro Thr Ala Ile	Ser Gln Lys Leu Pro 1900 Ser	Asp Phe Ile Pro 1885 Phe	Thr Leu 1870 Asp Glu	Phe 1855 Gln Trp	1840 Pro Gln Cys Arg
Pro Asp Glu  Ile Glu Glu  183  Glu Gln Leu  1890  Gln Leu Tyn  1905	Gln Gl 18 1 Phe Th 1860 1 Pro Le 5 1 Thr Se	rg Ile 1830 lu Asp 345 nr Ser eu Ala er Lys nr Cys 1910	Gly Lys Leu Cys 1895	Asp Lys Ala 1880 Pro	Glu Ile 1865 Ser Phe	Gln 1850 Thr Gly Leu Gly	Ala 1835 Pro Thr Ala Ile Ala 1915	Ser Gln Lys Leu Pro 1900 Ser	Asp Phe Ile Pro 1885 Phe Arg	Thr Leu 1870 Asp Glu Ala	Phe 1855 Gln Trp Thr	1840 Pro Gln Cys Arg Val 1920
Pro Asp Glu  Ile Glu Glu  182  Glu Gln Leu  1890  Gln Leu Tyn	Gln Gl 18 1 Phe Th 1860 1 Pro Le 5 1 Thr Se 1 Phe Th	rg Ile 1830 lu Asp 345 nr Ser eu Ala er Lys nr Cys 1910 rg Arg	Gly Lys Leu Cys 1895	Asp Lys Ala 1880 Pro	Glu Ile 1865 Ser Phe	Gln 1850 Thr Gly Leu Gly Val	Ala 1835 Pro Thr Ala Ile Ala 1915 Glu	Ser Gln Lys Leu Pro 1900 Ser	Asp Phe Ile Pro 1885 Phe Arg	Thr Leu 1870 Asp Glu Ala	Phe 1855 Gln Trp Thr	1840 Pro Gln Cys Arg Val 1920 Thr
Pro Asp Glu  Ile Glu Glu  Ile Glu Glu  I890  Glu Leu  I890  Trp Leu Glu	Gln Gl 18 1 Phe Th 1860 1 Pro Le 5 1 Thr Se 1 Phe Th	rg Ile 1830 lu Asp 345 nr Ser eu Ala er Lys nr Cys 1910 rg Arg	Leu Gly Lys Leu Cys 1895 Thr	Asp Lys Ala 1880 Pro Ser	Glu Ile 1865 Ser Phe Phe	Gln 1850 Thr Gly Leu Gly Val 1930	Ala Pro Thr Ala Ile Ala 1915 Glu	Ser Gln Lys Leu Pro 1900 Ser Arg	Asp Phe Ile Pro 1885 Phe Arg	Thr Leu 1870 Asp Glu Ala Arg	Phe 1855 Gln Trp Thr Ile Thr 1935	1840 Pro Gln Cys Arg Val 1920 Thr
Pro Asp Glu  Ile Glu Glu  183  Glu Gln Leu  1890  Gln Leu Tyn  1905	Gln Gl 18 1 Phe Th 1860 1 Pro Le 5 1 Thr Se 1 Phe Th 1 Asn An 19	rg Ile 1830 lu Asp 345 nr Ser eu Ala er Lys nr Cys 1910 rg Arg	Leu Gly Lys Leu Cys 1895 Thr	Asp Lys Ala 1880 Pro Ser	Glu Ile 1865 Ser Phe Phe Thr	Gln 1850 Thr Gly Leu Gly Val 1930 Glu	Ala Pro Thr Ala Ile Ala 1915 Glu	Ser Gln Lys Leu Pro 1900 Ser Arg	Asp Phe Ile Pro 1885 Phe Arg	Thr Leu 1870 Asp Glu Ala Arg	Phe 1855 Gln Trp Thr Ile Thr 1935 Arg	1840 Pro Gln Cys Arg Val 1920 Thr
Pro Asp Glu  Ile Glu Glu  Ile Glu Gln  I890  Gln Leu Tyn  1905  Trp Leu Glr  Ser Ser Val	Gln Gl 18 1 Phe Th 1860 1 Pro Le 5 1 Thr Se 1 Phe Th 1 Asn An 19 1 Arg An 1940	rg Ile 1830 lu Asp 345 nr Ser eu Ala er Lys nr Cys 1910 rg Arg 925 rg Asp	Leu Gly Lys Leu Cys 1895 Thr Glu	Asp Lys Ala 1880 Pro Ser Ala	Glu Ile 1865 Ser Phe Thr Gly 1945	Gln 1850 Thr Gly Leu Gly Val 1930 Glu	Ala 1835 Pro Thr Ala Ile Ala 1915 Glu	Ser Gln Lys Leu Pro 1900 Ser Arg	Phe Ile Pro 1885 Phe Arg Thr	Leu 1870 Asp Glu Ala Arg Gly 1950	Phe 1855 Gln Trp Thr Ile Thr 1935 Arg	1840 Pro Gln Cys Arg Val 1920 Thr
Pro Asp Glu  Ile Glu Glu  Ile Glu Glu  Ile Glu Gln  Ile Glu Gln Leu  1890  Gln Leu Tyn  1905  Trp Leu Gln  Ser Ser Val  Lys His Glu	Gln Gl 1860 1 Pro Le 15 1 Thr Se 1 Thr Se 1 Asn An 1940 1 Arg Va	rg Ile 1830 lu Asp 345 nr Ser eu Ala er Lys nr Cys 1910 rg Arg 925 rg Asp	Leu Gly Lys Leu Cys 1895 Thr Glu	Asp Lys Ala 1880 Pro Ser Ala Pro	Glu Ile 1865 Ser Phe Phe Thr Gly 1945 Arg	Gln 1850 Thr Gly Leu Gly Val 1930 Glu	Ala 1835 Pro Thr Ala Ile Ala 1915 Glu	Ser Gln Lys Leu Pro 1900 Ser Arg	Asp Phe Ile Pro 1885 Phe Arg Thr Val Leu	Leu 1870 Asp Glu Ala Arg Gly 1950 Met	Phe 1855 Gln Trp Thr Ile Thr 1935 Arg	1840 Pro Gln Cys Arg Val 1920 Thr
Pro Asp Glu  Ile Glu Glu  Ile Glu Gln  I890  Gln Leu Tyn  1905  Trp Leu Gln  Ser Ser Val  Lys His Glu  199	Gln Gl 1860 1 Pro Le 5 1 Thr Se 1 Asn As 1940 1 Arg Va	rg Ile 1830 lu Asp 345 nr Ser eu Ala er Lys nr Cys 1910 rg Arg 925 rg Asp al Lys	Leu Gly Lys Leu Cys 1895 Thr Glu Asp	Asp Lys Ala 1880 Pro Ser Ala Pro 1960	Glu Ile 1865 Ser Phe Phe Thr Gly 1945 Arg	Gln 1850 Thr Gly Leu Gly Val 1930 Glu Gly	Ala 1835 Pro Thr Ala Ile Ala 1915 Glu Phe	Ser Gln Lys Leu Pro 1900 Ser Arg Arg	Phe Ile Pro 1885 Phe Arg Thr Val Leu 1965	Leu 1870 Asp Glu Ala Arg Gly 1950 Met	Phe 1859 Gln Trp Thr Ile Thr 1939 Arg	1840 Pro Gln Cys Arg Val 1920 Thr Leu
Pro Asp Glu  Ile Glu Glu  Ile Glu Glu  Ile Glu Gln  Ser Ser Val  Lys His Glu  Ile Glu Ass	Gln Gl 1860 1 Pro Le 5 1 Thr Se 1 Asn As 1940 1 Arg Va	rg Ile 1830 lu Asp 345 nr Ser eu Ala er Lys nr Cys 1910 rg Arg 925 rg Asp al Lys	Leu Gly Lys Leu Cys 1895 Thr Glu Asp Val	Asp Lys Ala 1880 Pro Ser Ala Pro Pro 1960 His	Glu Ile 1865 Ser Phe Phe Thr Gly 1945 Arg	Gln 1850 Thr Gly Leu Gly Val 1930 Glu Gly	Ala 1835 Pro Thr Ala Ile Ala 1915 Glu Phe	Ser Gln Lys Leu Pro 1900 Ser Arg Arg Ser Lys	Asp Phe Ile Pro 1885 Phe Arg Thr Val Leu 1965 Ser	Leu 1870 Asp Glu Ala Arg Gly 1950 Met	Phe 1859 Gln Trp Thr Ile Thr 1939 Arg	1840 Pro Gln Cys Arg Val 1920 Thr Leu
Pro Asp Glu  Ile Glu Glu  Ile Glu Glu  Ile Glu Gln  Ile Glu Tyn  Ile Glu	Gln Gl 18 1 Phe Th 1860 1 Pro Le 15 1 Thr Se 1 Phe Th 1 Asn An 1940 1 Arg Va 155 1 Val Me	rg Ile 1830 lu Asp 345 nr Ser eu Ala er Lys nr Cys 1910 rg Arg 925 rg Asp al Lys et Gln	Leu Gly Lys Leu Cys 1899 Thr Glu Asp Val	Asp Lys Ala 1880 Pro Ser Ala Pro Pro 1960 His	Glu Ile 1865 Ser Phe Phe Thr Gly 1945 Arg	Gln 1850 Thr Gly Leu Gly Val 1930 Glu Glu Gly Asp	Ala 1835 Pro Thr Ala Ile Ala 1915 Glu Phe Glu Arg	Ser Gln Lys Leu Pro 1900 Ser Arg Arg Arg Lys 1980	Phe Ile Pro 1885 Phe Arg Thr Val Leu 1965 Ser	Leu 1870 Asp Glu Ala Arg Gly 1950 Met	Phe 1859 Gln Trp Thr Ile Thr 1939 Arg Glu Leu	1840 Pro Gln Cys Arg Val 1920 Thr Leu Trp
Pro Asp Glu  Ile Glu Glu  Ile Glu Glu  Ile Glu Gln  Ser Ser Val  Lys His Glu  Ile Glu Ass	Gln Gl 18 1 Phe Th 1860 1 Pro Le 15 1 Thr Se 1 Phe Th 1 Asn An 1940 1 Arg Va 155 1 Val Me	rg Ile 1830 lu Asp 345 nr Ser eu Ala er Lys nr Cys 1910 rg Arg 925 rg Asp al Lys et Gln ly Glu	Leu Gly Lys Leu Cys 1895 Thr Glu Asp Val Ile 1975 Glu	Asp Lys Ala 1880 Pro Ser Ala Pro Pro 1960 His	Glu Ile 1865 Ser Phe Phe Thr Gly 1945 Arg	Gln 1850 Thr Gly Leu Gly Val 1930 Glu Glu Gly Asp	Ala 1835 Pro Thr Ala Ile Ala 1915 Glu Phe Glu Arg Leu	Ser Gln Lys Leu Pro 1900 Ser Arg Arg Lys 1980 Gly	Phe Ile Pro 1885 Phe Arg Thr Val Leu 1965 Ser	Leu 1870 Asp Glu Ala Arg Gly 1950 Met	Phe 1859 Gln Trp Thr Ile Thr 1939 Arg Glu Leu	1840 Pro Gln Cys Arg Val 1920 Thr Leu Trp Glu
Pro Asp Glu  Ile Glu Glu  Ile Glu Gln  Ile Glu Tyn  Ile Glu  Ile	Gln Gl 18 1 Phe Th 1860 1 Pro Le 15 1 Thr Se 1 Phe Th 1 Asn An 1940 1 Arg Va 15 1 Val Me	rg Ile 1830 lu Asp 345 nr Ser eu Ala er Lys nr Cys 1910 rg Arg 925 rg Asp al Lys et Gln ly Glu 1990	Leu Gly Lys Leu Cys 1895 Thr Glu Asp Val Ile 1975 Glu	Asp Lys Ala 1880 Pro Ser Ala Pro 1960 His	Glu Ile 1865 Ser Phe Phe Thr Gly 1945 Arg Arg	Gln 1850 Thr Gly Leu Gly Val 1930 Glu Gly Asp	Ala 1835 Pro Thr Ala Ile Ala 1915 Glu Phe Glu Arg Leu 1995	Ser Gln Lys Leu Pro 1900 Ser Arg Arg Lys 1980 Gly	Phe Ile Pro 1885 Phe Arg Thr Val Leu 1965 Ser	Leu 1870 Asp Glu Ala Arg Gly 1950 Met Val	Phe 1855 Gln Trp Thr Ile Thr 1935 Arg Glu Leu	1840 Pro Gln Cys Arg Val 1920 Thr 5 Leu Trp Glu Glu 2000
Pro Asp Glu  Ile Glu Glu  Ile Glu Glu  Ile Glu Gln  Ile Glu Tyn  Ile Glu  Ile	Gln Gl 18 1 Phe Th 1860 1 Pro Le 15 1 Thr Se 1 Phe Th 1 Asn An 1940 1 Arg Va 15 1 Val Me	rg Ile 1830 lu Asp 345 nr Ser eu Ala er Lys nr Cys 1910 rg Arg 925 rg Asp al Lys et Gln ly Glu 1990	Leu Gly Lys Leu Cys 1895 Thr Glu Asp Val Ile 1975 Glu	Asp Lys Ala 1880 Pro Ser Ala Pro 1960 His	Glu Ile 1865 Ser Phe Phe Thr Gly 1945 Arg Arg	Gln 1850 Thr Gly Leu Gly Val 1930 Glu Gly Asp	Ala 1835 Pro Thr Ala Ile Ala 1915 Glu Phe Glu Arg Leu 1995	Ser Gln Lys Leu Pro 1900 Ser Arg Arg Lys 1980 Gly	Phe Ile Pro 1885 Phe Arg Thr Val Leu 1965 Ser	Leu 1870 Asp Glu Ala Arg Gly 1950 Met Val	Phe 1855 Gln Trp Thr Ile Thr 1935 Arg Glu Leu	1840 Pro Gln Cys Arg Val 1920 Thr 5 Leu Trp Glu Glu 2000
Pro Asp Glu  Ile Glu Glu  1890 Glu Gln Leu 1890 Gln Leu Tyn 1905 Trp Leu Gln  Ser Ser Val  Lys His Glu 1990 Ala Glu Asn 1970 Val Glu Phe 1985 Phe Tyr Ala	Gln Gl 18 1 Phe Th 1860 1 Pro Le 15 1 Thr Se 1 Asn An 1940 1 Arg Va 15 1 Val Me 2 Leu G	rg Ile 1830 lu Asp 345 nr Ser eu Ala er Lys nr Cys 1910 rg Arg 925 rg Asp al Lys et Gln ly Glu 1990 al Ala	Leu Gly Lys Leu Cys 1895 Thr Glu Asp Val Ile 1975 Glu Ala	Asp Lys Ala 1880 Pro Ser Ala Pro 1960 His Gly Glu	Glu Ile 1865 Ser Phe Phe Thr Gly 1945 Arg Ala Thr	Gln 1850 Thr Gly Leu Gly Val 1930 Glu Gly Asp Gly Gly Clin 2010	Ala 1835 Pro Thr Ala Ile Ala 1915 Glu Phe Glu Arg Leu 1995 Arg	Ser Gln Lys Leu Pro 1900 Ser Arg Arg Lys 1980 Gly Thr	Phe Ile Pro 1885 Phe Arg Thr Val Leu 1965 Ser Pro	Leu 1870 Asp Glu Ala Arg Gly 1950 Met Val Thr	Phe 1855 Gln Trp Thr Ile Thr 1935 Arg Glu Leu Leu Gly 2015	1840 Pro Gln Cys Arg Val 1920 Thr 5 Leu Trp Glu 2000 Ala
Pro Asp Glu  Ile Glu Glu  Ile Glu Gln  Ile Glu Tyn  Ile Glu  Ile	Gln Gl 18 1 Phe Th 1860 1 Pro Le 15 1 Thr Se 1 Asn An 1940 1 Arg Va 15 1 Val Me 2 Leu G	rg Ile 1830 lu Asp 345 nr Ser eu Ala er Lys nr Cys 1910 rg Arg 925 rg Asp al Lys et Gln ly Glu 1990 al Ala	Leu Gly Lys Leu Cys 1895 Thr Glu Asp Val Ile 1975 Glu Ala	Asp Lys Ala 1880 Pro Ser Ala Pro 1960 His Gly Glu	Glu Ile 1865 Ser Phe Phe Thr Gly 1945 Arg Ala Thr	Gln 1850 Thr Gly Leu Gly Val 1930 Glu Gly Asp Gly Gly Clin 2010	Ala 1835 Pro Thr Ala Ile Ala 1915 Glu Phe Glu Arg Leu 1995 Arg	Ser Gln Lys Leu Pro 1900 Ser Arg Arg Lys 1980 Gly Thr	Phe Ile Pro 1885 Phe Arg Thr Val Leu 1965 Ser Pro	Leu 1870 Asp Glu Ala Arg Gly 1950 Met Val Thr	Phe 1855 Gln Trp Thr Ile Thr 1935 Arg Glu Leu Leu Gly 2015	1840 Pro Gln Cys Arg Val 1920 Thr 5 Leu Trp Glu 2000 Ala
Pro Asp Glu  Ile Glu Glu  1890 Glu Gln Leu 1890 Gln Leu Tyn 1905 Trp Leu Gln  Ser Ser Val  Lys His Glu 1990 Ala Glu Asn 1970 Val Glu Phe 1985 Phe Tyr Ala	Gln Gl 18 1 Phe Th 1860 1 Pro Le 15 1 Thr Se 1 Asn An 1940 1 Arg Va 15 1 Val Me 2 Leu G	rg Ile 1830 lu Asp 345 nr Ser eu Ala er Lys nr Cys 1910 rg Arg 925 rg Asp al Lys et Gln ly Glu 1990 al Ala	Leu Gly Lys Leu Cys 1895 Thr Glu Asp Val Ile 1975 Glu Ala	Asp Lys Ala 1880 Pro Ser Ala Pro 1960 His Gly Glu	Glu Ile 1865 Ser Phe Phe Thr Gly 1945 Arg Arg Ala Thr	Gln 1850 Thr Gly Leu Gly Val 1930 Glu Gly Asp Gly Asp Asp	Ala 1835 Pro Thr Ala Ile Ala 1915 Glu Phe Glu Arg Leu 1995 Arg	Ser Gln Lys Leu Pro 1900 Ser Arg Arg Lys 1980 Gly Thr	Phe Ile Pro 1885 Phe Arg Thr Val Leu 1965 Ser Pro	Leu 1870 Asp Glu Ala Arg Gly 1950 Met Val Thr	Phe 1855 Gln Trp Thr Ile Thr 1935 Arg Glu Leu Leu Gly 2015 Val	1840 Pro Gln Cys Arg Val 1920 Thr 5 Leu Trp Glu 2000 Ala

		2035	5				2040	)				2045	5		
Gly	Leu	Phe	Thr	Ala	Pro	Phe	Pro	Gln	Asp	Ser	Asp	Glu	Leu	Glu	Arg
-	2050					2055				•	2060				
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		Trn	Lou	ħen.			T.211	Thr	ጥተነ			Dhe	Glu	Leu	
PIO	мта	пр	пец	2169		116	DCG	1111	2170		пор	1110		2179	
n c m	Dvo	uic	7~~			Dho	T.em	Live			Lve	Asn	Len	Ala	
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гаг	Arg	219		TIE	neu	ser	2200		GIY	Dea	Ser	220		GIU	цуэ
•	m\			<b>61</b> -	<b>a</b> 1	T			T	7	D=0			co~	C1.,
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_	2210			-1-	<b>01</b>			~1	<b>.</b>	N	2220		nha	C1.0	D===
		Leu	ser	TTE		_	Leu	GIY	Leu			GIII	Pne	cys	Pro 2240
2225					2230	,				2235	•				2240
_	_ `		- 7 -		<b>a</b> 3	DL-	m\	n 1 -	*** 3		T	T	D	C	<b>Cl.</b>
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T 0.11	7 000	C1	Trn		Tara	Clu	Lan	T1.77		Asn	T.011	Val	Lvs		Asn
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TÀL	гуѕ		гéп	Met	Ser	ьeu		AId	Gru	Gry	Jer	285	110	цуз	110
•		275	17- 1	~1 <u>~</u>	71-	~1	280	N	C1	~1	Dro		Wa I	Trn	Glu
Asp		Pro	vai	GIN	Ala		PIO	Arg		Glu	300	Cys	vai	тър	GIU
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Ile	Pro		Glu	Ser	Ile	Thr		Asp	Ser	Pro	IIe		АТА	GIN	Asp
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Leu Pro Phe Gly Lys Val Thr Asn Leu Leu Met Leu Lys Gly Lys Ser
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Gln Ala Phe Leu Glu Met Ala Ser Glu Glu Ala Ala Val Thr Met Val
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Asn Tyr Tyr Thr Pro Ile Thr Pro His Leu Arg Ser Gln Pro Val Tyr
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Ile Gln Tyr Ser Asn His Arg Glu Leu Lys Thr Asp Asn Leu Pro Asn
Gln Ala Arg Ala Gln Ala Ala Leu Gln Ala Val Ser Ala Val Gln Ser
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Gly Ser Leu Ala Leu Ser Gly Gly Pro Ser Asn Glu Gly Thr Val Leu
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Pro Gly Gln Ser Pro Val Leu Arg Ile Ile Ile Glu Asn Leu Phe Tyr
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Asp Gly Gln Asn Ile Tyr Asn Ala Cys Cys Thr Leu Arg Ile Asp Phe
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Pro Tyr Ala Gly Ala Ala Gly Phe Ala Pro Ala Ile Gly Phe Pro Gln
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Ala Thr Gly Leu Ser Val Pro Ala Val Pro Gly Ala Leu Gly Pro Leu
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Ser Gly Ile Pro Gly Asn Ser Val Leu Leu Val Thr Asn Leu Asn Pro
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Asp Leu Ile Thr Pro His Gly Leu Phe Ile Leu Phe Gly Val Tyr Gly
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Asp Val His Arg Val Lys Ile Met Phe Asn Lys Lys Glu Asn Ala Leu
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His Gln Ala Val Gln Leu Pro Arg Glu Gly Gln Glu Asp Gln Gly Leu
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Ser Lys Asn Phe Gln Asn Ile Phe Pro Pro Ser Ala Thr Leu His Leu
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Ile Glu Ala Gly Cys Ser Val Lys Ala Phe Lys Phe Phe Gln Lys Asp
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Arg Lys Met Ala Leu Ile Gln Leu Gly Ser Val Glu Glu Ala Ile Gln
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<400> 4069

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Phe Gln His Thr Gln His Leu Ala Ile Ser Lys His Asn Leu Met Phe
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Gln Thr Ser Thr Met Thr Phe Ala Pro Phe Glu Asp Thr Leu Ser Trp
Met Leu Phe Gly Trp Gln Gln Pro Phe Ser Ser Cys Glu Lys Lys Ser
Glu Ala Lys Ser Pro Ser Asn Gly Val Gly Ser Leu Ala Ser Lys Pro
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Val Asp Val Ala Ser Asp Asn Val Lys Lys His Thr Lys Lys Asn
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Gln Ala Leu Lys Ala Arg Met Thr Ser Phe His Arg Phe Phe Phe Thr
Ala Asn Gln Val Lys Ile Tyr Thr Asn Gln Glu Lys Thr Arg Thr Phe
Ile Gly Leu Glu Val Thr Ser Gly His Ala Gln Phe Leu Asp Leu Val
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Ser Glu Val Asp Arg Val Met Glu Glu Phe Asn Leu Thr Thr Phe Tyr
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Gln Asp Pro Ser Phe His Leu Ser Leu Ala Trp Cys Val Gly Asp Ala
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Arg Leu Gln Leu Glu Gly Gln Cys Leu Gln Glu Leu Gln Ala Ile Val
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3259

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Ser Thr Met Pro Ser Gln Thr Val Leu Pro Pro Glu Pro Val Gln Leu
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Cys Lys Ser Glu Gln Arg Pro Ser Ser Leu Pro Val Gly Pro Val Leu
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Ala Thr Leu Gly His His Gln Thr Pro Thr Pro Asn Ser Thr Gly Ser
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Gly His Ser Pro Pro Ser Ser Ser Leu Thr Ser Pro Ser His Val Asn
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Leu Ser Pro Asn Thr Val Pro Glu Phe Ser Tyr Ser Ser Ser Glu Asp
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Glu Phe Tyr Asp Ala Asp Glu Phe His Gln Ser Gly Ser Ser Pro Lys
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Arg Leu Ile Asp Ser Ser Gly Ser Ala Ser Val Leu Thr His Ser Ser
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Ser Gly Asn Ser Leu Lys Arg Pro Asp Thr Thr Glu Ser Leu Asn Ser
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Ser Leu Ser Asn Gly Thr Ser Asp Ala Asp Leu Phe Asp Ser His Asp
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Asp Arg Asp Asp Ala Glu Ala Gly Ser Val Glu Glu His Lys Ser
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Val Ile Met His Leu Leu Ser Gln Val Arg Leu Gly Met Asp Leu Thr
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Lys Val Val Leu Pro Thr Phe Ile Leu Glu Arg Arg Ser Leu Leu Glu
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Met Tyr Ala Asp Phe Phe Ala His Pro Asp Leu Phe Val Ser Ile Ser
Asp Gln Lys Asp Pro Lys Asp Arg Met Val Gln Val Val Lys Trp Tyr
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270

265

260

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Tyr Asn Pro Ile Leu Gly Glu Ile Phe Gln Cys His Trp Thr Leu Pro
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Asn Asp Thr Glu Glu Asn Thr Glu Leu Val Ser Glu Gly Pro Val Pro
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Trp Val Ser Lys Asn Ser Val Thr Phe Val Ala Glu Gln Val Ser His
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His Pro Pro Ile Ser Ala Phe Tyr Ala Glu Cys Phe Asn Lys Lys Ile
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Gln Phe Asn Ala His Ile Trp Thr Lys Ser Lys Phe Leu Gly Met Ser
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Ile Gly Val His Asn Ile Gly Gln Gly Cys Val Ser Cys Leu Asp Tyr
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Asp Glu His Tyr Ile Leu Thr Phe Pro Asn Gly Tyr Gly Arg Ser Ile
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Leu Thr Val Pro Trp Val Glu Leu Gly Gly Glu Cys Asn Ile Asn Cys
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Ser Lys Thr Gly Tyr Ser Ala Asn Ile Ile Phe His Thr Lys Pro Phe
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Val Asn Leu Asp Gln Trp Thr Gln Glu Gln Ile Gln Cys Met Gln Glu
Met Gly Asn Gly Lys Ala Asn Arg Leu Tyr Glu Ala Tyr Leu Pro Glu
Thr Phe Arg Arg Pro Gln Ile Asp Pro Ala Val Glu Gly Phe Ile Arg
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Asp Lys Tyr Glu Lys Lys Lys Tyr Met Asp Arg Ser Leu Asp Ile Asn
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Ala Phe Arg Lys Glu Lys Asp Asp Lys Trp Lys Arg Gly Ser Glu Pro
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Val Pro Glu Lys Lys Leu Glu Pro Val Val Phe Glu Lys Val Lys Met
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Pro Gln Lys Lys Glu Asp Pro Gln Leu Pro Arg Lys Ser Ser Pro Lys
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Cys Ser Ile Ala Asn Ser Lys Thr Ser Asn Thr Leu Glu Lys Asp Leu
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Asp Leu Leu Ala Ser Val Pro Ser Pro Ser Ser Ser Gly Ser Arg Lys
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Val Val Gly Ser Met Pro Thr Ala Gly Ser Ala Gly Ser Val Pro Glu
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Asn Leu Asn Leu Phe Pro Glu Pro Gly Ser Lys Ser Glu Glu Ile Gly
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Lys Lys Gln Leu Ser Lys Asp Ser Ile Leu Ser Leu Tyr Gly Ser Gln
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Ala Tyr Pro Thr Ala Tyr Pro Ser Phe Pro Gly Val Thr Pro Pro Asn
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Pro Gly Ala Ser Gly Met Val Ala Pro Met Ala Met Pro Ala Gly Tyr
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Thr Val Tyr Gly Val Gln Pro Ala Gln Gln Leu Gln Trp Asn Leu Thr
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Gln Met Thr Gln Gln Met Ala Gly Met Asn Phe Tyr Gly Ala Asn Gly
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                    70
Arg Gln His Phe Val Glu Asn Asp Glu Met Tyr Ser Val Gln Asp Leu
Leu Asp Val His Ala Gly Arg Leu Gly Cys Ser Leu Thr Glu Ile His
                                105
Thr Leu Phe Ala Lys His Ile Lys Leu Asp Cys Glu Arg Cys Gln Ala
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Lys Gly Phe Val Cys Glu Leu Cys Arg Glu Gly Asp Val Leu Phe Pro
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Phe Asp Ser His Thr Ser Val Cys Ala Asp Cys Ser Ala Val Phe His
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Tyr Thr Gly Tyr Asp Met Glu Asp Ala Met Ile Val Asn Lys Ala Ser
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Lys Leu Arg Arg Val Gln Arg Pro Glu Asp Ala Ser Gly Gly Ser Ser
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Cys Cys Phe Asp Lys Thr Gly Thr Leu Thr Ser Asp Ser Leu Val Val
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Met Gln Leu Asp Asp Gly Thr Leu Val Gly Asp Pro Leu Glu Lys Ala
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Pro Arg Ser Ile Lys Thr Gln Gly Leu Lys Ile His Gln Arg Phe His
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Leu		Ser	Thr	Asp	I.eu			Tle	Δla	<b>Δ</b> 1 =			Glv	λla	Pro
225					230	-10	- / -			235	•••	<b>_</b> , _,	OLY	AIG	240
Glu	Thr	Leu	His	Ser	Met	Phe	Ser	Gln	Cvs		Pro	Asp	Tvr	His	
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			****	325	• • • • • • • • • • • • • • • • • • • •	V41	1100	116	330	GLY	wsb	ASII	PLO	335	1111
Ala	Cys	His	Val		Gln	Glu	Leu	His		Ile	Glu	Lvs	Ala		Thr
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• ,		595			~ <i>E</i>		600				J_11	605	~~ <b>u</b>	u	u
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Ala Val Ala Arg Val Arg Ser Ala Gly Pro Ser Cys Gln Asn Lys Gly
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Asp Leu Val Met Glu Ala Leu Leu Glu Gly Ile Gln Asn Arg Gly His
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Gly Gly Phe Leu Thr Ser Cys Glu Ala Glu Leu Gln Glu Leu Met
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Lys Gln Ile Asp Ile Met Val Ala His Lys Lys Ser Glu Trp Glu Gly
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Arg Thr His Ala Leu Glu Thr Cys Leu Lys Ile Arg Glu Gln Glu Leu
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Lys Ser Leu Arg Ser Gln Leu Asp Val Thr His Lys Glu Val Gly Met
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Leu His Gln Gln Val Glu Glu His Glu Lys Ile Lys Gln Glu Met Thr
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Met Glu Tyr Lys Gln Glu Leu Lys Lys Leu His Glu Glu Leu Cys Ile
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Leu Lys Arg Ser Tyr Glu Lys Leu Gln Lys Lys Gln Met Arg Glu Phe
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Arg Gly Asn Thr Lys Asn His Arg Glu Asp Arg Ser Glu Ile Glu Arg
                                185
Leu Thr Ala Lys Ile Glu Glu Phe Arg Gln Lys Ser Leu Asp Trp Glu
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Lys Gln Arg Leu Ile Tyr Gln Gln Gln Val Ser Ser Leu Glu Ala Gln
                        215
                                            220 '
Arg Lys Ala Leu Ala Glu Gln Ser Glu Ile Ile Gln Ala Gln Leu Val
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                                        235
Asn Arg Lys Gln Lys Leu Glu Ser Val Glu Leu Ser Ser Gln Ser Glu
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Ile Gln His Leu Ser Ser Lys Leu Glu Arg Ala Asn Asp Thr Ile Cys
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Ala Asn Glu Leu Glu Ile Glu Arg Leu Thr Met Arg Val Asn Asp Leu
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Val Gly Thr Ser Met Thr Val Leu Gln Glu Gln Gln Gln Lys Glu Glu
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Lys Leu Arg Glu Ser Glu Lys Leu Leu Glu Ala Leu Gln Glu Lys
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 Lys Asn Tyr Ala Leu Gln Glu His Val Ser Phe Val Ile Phe Leu Ser
                             40
         35
 Ser Asn Phe Phe Trp Arg Asp Glu Ser Phe Asp Leu Thr Leu Arg Ile
                         55
 Gly Leu Lys Pro Phe Glu Arg Thr Lys Glu Ile Glu Ser Ala Phe Leu
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                                         75
 Ser Pro Cys Ser Glu Asp Pro Ser His Leu Val Thr Ala Pro Trp Ala
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 Val Tyr Phe His Cys Leu Trp Lys Ile Glu Tyr Thr Cys
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720

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                                                 45
Ala Arg Leu Leu Arg Gln Tyr Asp Asn Glu Lys Lys Trp Glu Leu Ile
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Cys Asp Gln Glu Arg Phe Gln Val Lys Asn Pro Pro His Thr Tyr Ile
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65
Gln Lys Leu Lys Gly Tyr Leu Asp Pro Ala Val Thr Arg Lys Lys Phe
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                85
Arg Arg Arg Val Gln Glu Ser Thr Gln Val Leu Arg Glu Leu Glu Ile
            100
                                 105
Ser Leu Arg Thr Asn His Ile Gly Trp Val Arg Glu Phe Leu Asn Glu
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Glu Asn Lys Gly Leu Asp Val Leu Val Glu Tyr Leu Ser Phe Ala Gln
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Tyr Ala Val Thr Phe Asp Phe Glu Ser Val Glu Ser Thr Val Glu Ser
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Ser Val Asp Lys Ser Lys Pro Trp Ser Arg Ser Ile Glu Asp Leu His
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Arg Gly Ser Asn Leu Pro Ser Pro Val Gly Asn Ser Val Ser Arg Ser
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Gly Arg His Ser Ala Leu Arg Tyr Asn Thr Leu Pro Ser Arg Arg Thr
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Leu Lys Asn Ser Arg Leu Val Ser Lys Lys Asp Asp Val His Val Cys
                      215
                                          220
Ile Met Cys Leu Arg Ala Ile Met Asn Tyr Gln Tyr Gly Phe Asn Met
                  230
                                     235
Val Met Ser His Pro His Ala Val Asn Glu Ile Ala Leu Ser Leu Asn
                                  250
              245
Asn Lys Asn Pro Arg Thr Lys Ala Leu Val Leu Glu Leu Leu Ala Ala
                              265
          260
Val Cys Leu Val Arg Gly Gly His Glu Ile Ile Leu Ser Ala Phe Asp
                          280
Asn Phe Lys Glu Val Cys Gly Glu Lys Gln Arg Phe Glu Lys Leu Met
                                           300
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Glu His Phe Arq Asn Glu Asp Asn Ile Asp Phe Met Val Ala Ser
                  310
                                      315
Met Gln Phe Ile Asn Ile Val Val His Ser Val Glu Asp Met Asn Phe
                                  330
               325
Arg Val His Leu Gln Tyr Glu Phe Thr Lys Leu Gly Leu Asp Glu Tyr
                              345
Leu Asp Lys Leu Lys His Thr Glu Ser Asp Lys Leu Gln Val Gln Ile
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Gln Ala Tyr Leu Asp Asn Val Phe Asp Val Gly Ala Leu Leu Glu Asp
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Ala Glu Thr Lys Asn Ala Ala
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<211> 83
<212> PRT
<213> Homo sapiens
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Arg Ala Arg Leu His Asp Ser Leu Arg Ala Val Leu Thr Cys Ser Thr
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Met Ser Ala Lys Ser Ala Ile Ser Lys Glu Ile Phe Ala Pro Leu Asp
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Glu Arg Met Leu Gly Ala Val Gln Val Lys Arg Arg Thr Lys Lys
                    70
                                        75
Ile Pro Phe Leu Ala Thr Gly Gly Gln Gly Glu Tyr Leu Thr Tyr Ile
                85
                                    90
Cys Leu Ser Val Thr Asn Lys Lys Pro Thr Gln Ala Ser Ile Thr Lys
                                105
Val Lys Gln Phe Glu Gly Ser Thr Ser Phe Val Arg Arg Ser Gln Trp
                            120
                                                125
Met Leu Glu Gln Leu Arg Gln Val Asn Gly Ile Asp Pro Asn Gly Asp
                        135
Ser Ala Glu Phe Asp Leu Leu Phe Glu Asn Ala Phe Asp Gln Trp Val
                    150
                                        155
Ala Ser Thr Ala Ser Glu Lys Cys Thr Phe Phe Gln Ile Leu His His
                                    170
Thr Cys Gln Arg Tyr Leu Thr Asp Arg Lys Pro Glu Phe Ile Asn Cys
                                185
Gln Ser Lys Ile Met Gly Gly Asn Ser Ile Leu His Ser Ala Ala Asp
                            200
Ser Val Thr Ser Ala Val Gln Lys Ala Ser Gln Ala Leu Asn Glu Arg
Gly Glu Arg Leu Gly Arg Ala Glu Glu Lys Thr Glu Asp Leu Lys Asn
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                                        235
Ser Ala Gln Gln Phe Ala Glu Thr Ala His Lys Leu Ala Met Lys His
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Lys Cys
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<211> 100
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Gly Phe Asp Leu Leu His Leu Ile Gln Gln Lys Asp Thr Lys Gln His
Leu Arg Lys Glu Lys Val His Val Ser Lys Ser Gly Gly Ser Gln Ala
Gln Ala Thr Gly Val Ile Ser Cys Val Ala Ser Arg Ile Cys Leu Ile
Pro Pro Ala Ser Asn Phe Asp Asp Thr Cys Ala Met Leu Ser Thr Leu
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Pro Glu Phe His
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<212> DNA
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240
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Asp Asp Arg Lys Asp Thr Cys Ser Pro Pro Phe Pro Gly Pro Arg His
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Val Gln Asn Ser Ser Trp Gly Leu Gln Leu Leu Gly Glu Thr Gln Gly
Leu Leu Leu His Ser Leu Gln Gly Leu Ser Arg Gln Arg Pro Trp Gly
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Gly Glu Ala Pro Ala Trp Ser Leu Pro Ala Pro Pro Met Gln Ala Val
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Glu Gly Arg Thr Arg Arg Arg Thr Arg Arg
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Ser 465	Ser	Tyr	Phe	Trp	Leu 470	Cys	Asn	Ala	Leu	Asp 475	Val	Tyr	Cys	Pro	Val 480
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Pro	Phe	Asp	Lys 740	Phe	Gln	Phe	Glu	Arg 745	Leu	Gly	Tyr	Phe	Ser 750	Val	Asp
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                            40
Pro Ser Pro Asp Arg Phe Gly Met Leu Pro Leu Asp Glu Pro Ala Ile
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Leu Val Ser Glu Phe Leu Asp Arg Phe Gln Ser Leu Cys His Leu Asp
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                                        75
Leu Gln Leu Pro Ser Leu Arg Pro Glu Asp Leu Lys Thr Met Cys Leu
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Thr Glu Asp Lys Ile Ser Leu Leu Leu His Leu Leu Glu Asp Glu Leu
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Asp His Arg Thr Asp Glu Arg Lys Thr Thr Ile Lys Leu Gly Ser Asp
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Ile Gln Val His Val Thr Ala Cys Ile Leu Ser Val Cys Gly Trp Ala
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Cys Ser Ser Ser Leu Glu Ser Met Gln Leu Ser Leu Ile Ala Cys Ser
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Gln Cys Met Arg Lys Val Gly Leu Trp Gly Phe Gln Gln Ile Glu Ser
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Ser Met Thr Asp Leu Asp Ala Ser Phe Gly Leu Thr Ser Ser Pro Ile
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Pro Gly Leu Glu Gly Arg Pro Glu Arg Leu Pro Leu Val Pro Glu Ser
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Pro Arg Arg Met Met Thr Arg Ser Gln Asp Ala Thr Phe Ser Pro Gly
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215

220

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Asp Thr Pro Gly Leu Glu Val Pro Ser Ser Xaa Ser Ala Glu Ser Gln
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Ile Thr Leu Gly Lys Glu Ser Arg Glu Asn Gly Gly Thr Glu Pro Asp
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Ala Ser Ala Pro Ala Glu Pro Gly Trp Lys Ala Val Leu Thr Ile Leu
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Pro Thr Leu Gly Ser Ser Asn Asn Gln Leu Asn Ser Ser Leu Leu Gln
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Val Tyr Ile Pro Asp Tyr Ser Val Arg Ala Leu Ser Asp Leu Gln Phe
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Val Lys Ile Ser Arg Gln Gln Tyr Gln Asn Ala Leu Met Ala Ser Arg
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Met Asp Lys Thr Pro Gln Ser Ser Asp Ser Glu Asn Thr Lys Ile Glu
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Leu Thr Leu Thr Glu Leu His Asp Gly Leu Pro Asp Glu Thr Ala Asn
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Pro Leu Arg Ser Pro Arg Thr Leu Pro Leu Glu Leu Gly Thr Gly Gly
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Ser Lys Pro Gly Pro Asp Pro Leu Asp Thr Arg Arg Leu Gln Gly Phe
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11-1	<b>v</b>		D	17-1	m	B		C1	2	C1	3 cm		Care	т1 о	Tla
vai			Pro	vai	ıyr		GIN	GIN	ASI	GIU		1114	.,cys	116	Ile
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Gly Leu Ala Thr Tyr Ala Gln Arg Arg Ile Thr Thr Glu Thr Tyr Gly
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Ala Ala Phe Thr Cys Leu Glu Thr Ala Phe Arg Leu Asp Ala Leu His
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Arg Gln Met Lys Leu Leu Gly Glu Asp Ser Pro Val Ser Lys Leu Gln
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Val Lys Leu Glu Pro Gly Val Asn Pro Ser His Leu Met Asn Leu Phe
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Thr Tyr Glu Lys Gly Tyr Cys Phe Val Tyr Tyr Leu Ser Gln Leu Cys
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Gly Asp Pro Gln Arg Phe Asp Asp Phe Leu Arg Ala Tyr Val Glu Lys
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Tyr Lys Phe Thr Ser Val Val Ala Gln Asp Leu Leu Asp Ser Phe Leu
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Ser Phe Phe Pro Glu Leu Lys Glu Gln Ser Val Asp Cys Arg Ala Gly
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Leu Glu Phe Glu Arg Trp Leu Asn Ala Thr Gly Pro Pro Leu Ala Glu
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Pro Asp Leu Ser Gln Gly Ser Ser Leu Thr Arg Pro Val Glu Ala Leu
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Phe Gln Leu Trp Thr Ala Glu Pro Leu Asp Gln Ala Ala Ala Ser Ala
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Ser Ala Ile Asp Ile Ser Lys Trp Arg Thr Phe Gln Thr Ala Leu Phe
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Leu Asp Arg Leu Leu Asp Gly Ser Pro Leu Pro Gln Glu Val Val Met
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Ser Leu Ser Lys Cys Tyr Ser Ser Leu Leu Asp Ser Met Asn Ala Glu
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Ile Arg Ile Arg Trp Leu Gln Ile Val Val Arg Asn Asp Tyr Tyr Pro
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Asp Leu His Arg Val Arg Arg Phe Leu Glu Ser Gln Met Ser Arg Met
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 Tyr Thr Ile Pro Leu Tyr Glu Asp Leu Cys Thr Gly Ala Leu Lys Ser
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 Phe Ala Leu Glu Val Phe Tyr Gln Thr Gln Gly Arg Leu His Pro Asn
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 Leu Arg Arg Ala Ile Gln Gln Ile Leu Ser Gln Gly Leu Gly Ser Ser
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Val Val Asp Gln Gly Ala Gly Ala Ser Arg Gly Gly Asn Thr Arg Lys
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Ser Leu Glu Asp Asn Gly Ser Thr Arg Val Thr Pro Ser Val Gln Pro
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His Leu Gln Pro Ile Arg Asn Met Ser Val Ser Arg Thr Met Glu Asp
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Ser Cys Glu Leu Asp Leu Val Tyr Val Thr Glu Arg Ile Ile Ala Val
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Ser Phe Pro Ser Thr Ala Asn Glu Glu Asn Phe Arg Ser Asn Leu Arg
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Glu Val Ala Gln Met Leu Lys Ser Lys His Gly Gly Asn Tyr Leu Leu
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Phe Asn Leu Ser Glu Arg Arg Pro Asp Ile Thr Lys Leu His Ala Lys
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Val Leu Glu Phe Gly Trp Pro Asp Leu His Thr Pro Ala Leu Glu Lys
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Ile Cys Ser Ile Cys Lys Ala Met Asp Thr Trp Leu Asn Ala Asp Pro
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His Asn Val Val Val Leu His Asn Lys Gly Asn Arg Gly Arg Ile Gly
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Val Val Ile Ala Ala Tyr Met His Tyr Ser Asn Ile Ser Ala Ser Ala
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Asp Gln Ala Leu Asp Arg Phe Ala Met Lys Arg Phe Tyr Glu Asp Lys
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 Ile Val Pro Ile Gly Gln Pro Ser Gln Arg Arg Tyr Val His Tyr Phe
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 Ser Gly Leu Leu Ser Gly Ser Ile Lys Met Asn Asn Lys Pro Leu Phe
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 Leu His His Val Ile Met His Gly Ile Pro Asn Phe Glu Ser Lys Gly
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                                 265
 Gly Cys Arg Pro Phe Leu Arg Ile Tyr Gln Ala Met Gln Pro Val Tyr
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 Ile Thr Ile Glu Pro Gly Leu Leu Leu Lys Gly Asp Ile Leu Leu Lys
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315

310

305

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Cys Tyr His Lys Lys Phe Arg Ser Pro Ala Arg Asp Val Ile Phe Arg
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Val Gln Phe His Thr Cys Ala Ile His Ala Trp Gly Val Val Phe Gly
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Lys Glu Asp Leu Asp Asp Ala Phe Lys Asp Asp Arg Phe Pro Glu Tyr
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Gly Lys Val Glu Phe Val Phe Ser Tyr Gly Pro Glu Lys Ile Gln Gly
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Met Glu His Leu Glu Asn Gly Pro Ser Val Ser Val Asp Tyr Asn Thr
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Ser Asp Pro Leu Ile Arg Trp Asp Ser Tyr Asp Asn Phe Ser Gly His
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Arg Asp Asp Gly Met Glu Glu Val Val Gly His Thr Gln Gly Pro Leu
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Asp Gly Ser Leu Tyr Ala Lys Val Lys Lys Lys Asp Ser Leu His Gly
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Ser Thr Gly Ala Val Asn Ala Thr Arg Pro Thr Leu Ser Ala Thr Pro
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Asn His Val Glu His Thr Leu Ser Val Ser Ser Asp Ser Gly Asn Ser
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Thr Ala Ser Thr Lys Thr Asp Lys Thr Asp Glu Pro Val Pro Gly Ala
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Glu Leu Asp Ser Asp Ser Glu Asp Leu Asp Pro Asn Pro Glu Asp Leu
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Asp Pro Val Ser Glu Asp Pro Glu Pro Asp Pro Glu Asp Leu Asn Thr
                                       75
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Val Pro Glu Asp Val Asp Pro Ser Tyr Glu Asp Leu Glu Pro Val Ser
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Glu Asp Leu Asp Pro Asp Ala Glu Ala Pro Gly Ser Glu Pro Gln Asp
                               105
                                                  110
 Pro Asp Pro Met Ser Ser Phe Asp Leu Asp Pro Asp Val Ile Gly
                                               125
                           120
 Pro Val Pro Leu Ile Leu Asp Pro Asn Ser Asp Thr Leu Ser Pro Gly
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                                           140
 Asp Pro Lys Val Asp Pro Xaa Ser Pro Leu Ala Ser Leu Arg Ala Pro
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 Arg Ser Trp Pro Pro Ala Pro Arg Cys Ser Pro Pro Pro Pro Ala Arg
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 Pro Gly Pro Ser Pro Ala Arg Ile Ala Ala Lys Pro Ser Ala Ala Ala
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Thr Ser Gly Ala Gly Pro Lys Ser Trp Gln Val Pro Pro Pro Ala Pro
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Glu Val Gln Ile Arg Thr Pro Arg Val Asn Cys Pro Glu Lys Val Ile
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Ile Cys Leu Asp Leu Ser Glu Glu Met Ser Leu Pro Lys Leu Glu Ser
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Phe Asn Gly Ser Lys Thr Asn Ala Leu Asn Val Ser Gln Lys Met Ile
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Glu Met Phe Val Arg Thr Lys His Lys Ile Asp Lys Ser His Glu Phe
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Ala Leu Val Val Val Asn Asp Asp Thr Ala Trp Leu Ser Gly Leu Thr
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Ser Asp Pro Arg Glu Leu Cys Ser Cys Leu Tyr Asp Leu Glu Thr Ala
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Ser Cys Ser Thr Phe Asn Leu Glu Gly Leu Phe Ser Leu Ile Gln Gln
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Lys Thr Glu Leu Pro Val Thr Glu Asn Val Gln Thr Ile Pro Pro
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Tyr Val Val Arg Thr Ile Leu Val Tyr Ser Arg Pro Pro Cys Gln Pro
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Gln Phe Ser Leu Thr Glu Pro Met Lys Lys Met Phe Gln Cys Pro Tyr
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Phe Phe Asp Val Val Tyr Ile His Asn Gly Thr Glu Glu Lys Glu
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Glu Glu Met Ser Trp Lys Asp Met Phe Ala Phe Met Gly Ser Leu Asp
                                265
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Thr Lys Gly Thr Ser Tyr Lys Tyr Glu Val Ala Leu Ala Gly Pro Ala
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Leu Glu Leu His Asn Cys Met Ala Lys Leu Leu Ala His Pro Leu Gln
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catggatett gaggacecae gaceaatett tgaetggatg cagateatee geaaacggge 240

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Leu Leu Ser Pro Asp Tyr Met Asp Leu Glu Asp Pro Arg Pro Ile Phe
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Asp Trp Met Gln Ile Ile Arg Lys Arg Ala Val Val Tyr Val Gly Leu
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Asp Ala Leu Ser Asp Thr Glu Val Ala Ala Ala Val Gly Asn Ser Met
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Val	LTni	с г.			T WIG	, G11	ı vaı					2 -	510		-
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Arc	T Lev	u Vai	l Ly:	s Glı	n Ile	. Lei	ı Ser	: Arg	j Alá	a Ası	n Thi	c ITE	e pro	) IT	e Ile
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24:		~ ^1	11 Ac	n Ac	n Sei	r Ag	n Val	Lv	s Pro	o As	p Ph	e Mei	t Va	l Th	r Leu
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615

610

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Lys Lys Leu Arg Asp Phe Glu Asp Asn Phe Phe Arg Gln Asn Gly Arg
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Asn Val Gln Lys Glu Asp Arg Thr Pro Met Ala Glu Glu Tyr Ser Glu
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cetegacget eggtgeetgt atetacteeg gggeetaggt eggeteeggg ggeggettag
gagaaggccg ccggcgagat gttcaaaaac acgttccaga gcggcttcct ctccatcctc
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gatgacaaga atgtgcgtcg tcgctttcgg gcaagtaact accagagcac .cacccgggtc
aaaccettca tetgcaccat geccatgegg etggatgaeg getggaacca gatteagtte
aacttgctag acttcacacg gcgagcatac ggcaccaatt acatcgagac cctcagagtg
720
cagatccatg caaattgtcg catccgacgg gtttacttct cagacagact ctactcagaa
780
gatgagctgc cggcagagtt caaactgtat ctcccagttc agaacaaggc aaagcaataa
840
ctggaattgt gactcgaggg atagacccct ggatgtgact cttctttta aaaggaaact
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tatacttggt gttgcttgtc atggacaccg gtgaacatgc cgtaactctg tgactgcatt
gtaagtgcag tgggggtaag cagtcctgtg agtggcgcat gaacgctgga gcttattccg
1080
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His Ile Lys Arg Ile Thr Asp Asn Asp Ile Gln Ser Leu Val Leu Glu
                            40
Ile Glu Gly Thr Asn Val Ser Thr Thr Tyr Ile Thr Cys Pro Ala Asp
                        55
Pro Lys Lys Thr Leu Gly Ile Lys Leu Pro Phe Leu Val Met Ile Ile
                                        75
                    70
Lys Asn Leu Lys Lys Tyr Phe Thr Phe Glu Val Gln Val Leu Asp Asp
                                    90
Lys Asn Val Arg Arg Arg Phe Arg Ala Ser Asn Tyr Gln Ser Thr Thr
                                105
                                                    110
            100
Arg Val Lys Pro Phe Ile Cys Thr Met Pro Met Arg Leu Asp Asp Gly
                            120
        115
Trp Asn Gln Ile Gln Phe Asn Leu Leu Asp Phe Thr Arg Arg Ala Tyr
                        135
Gly Thr Asn Tyr Ile Glu Thr Leu Arg Val Gln Ile His Ala Asn Cys
                                        155
                    150
Arg Ile Arg Arg Val Tyr Phe Ser Asp Arg Leu Tyr Ser Glu Asp Glu
                                    170
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Leu Pro Ala Glu Phe Lys Leu Tyr Leu Pro Val Gln Asn Lys Ala Lys
                                185
Gln
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ggccctgaaa atagtgcaca gtgctgggta ctgccccggc tggaggcacc tagttgttga
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acgcgaagct ggaccggcca ggttcagagc ccgcctcggt tgctcccaat cagaatctgc
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gcacaggage tggcctcate etecgtgcag ageoggtege gcagggtetg caceteeege
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gegetgetgg geacaggteg gteatggeea ceteteggae gatgaggtga aegttggege
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Gly Cys Pro Ala Val Arg Lys Ala Ser Ala Gly Ala Ala Ala Val
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gagaagcacc tcacggctcc tacccgcact catcgcggac agtgcctgca gcgggagcgg

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30
                               25
Arg Glu Gly Glu Thr Pro Ala Glu Asp Ala Lys Leu Asp Arg Pro Gly
                           40
Ser Glu Pro Ala Ser Val Ala Pro Asn Gln Asn Leu Leu Cys Ala Pro
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Arg Pro Pro Ser Thr Phe Met Ser Val Leu Leu Arg Gly Gln Val
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<212> DNA
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                                25
Asn Gly Lys Met Ser Pro Thr Arg Phe His Ala Asn Ser Met Gly Gln
Arg Ser Tyr Ser Phe Glu Ala Ser Glu Glu Asp Leu Asp Val Asn Asp
                        55
Lys Val Glu Glu Leu Met Arg Arg Asp Ser Ser Val Ile Lys Glu Glu
                                        75
Ile Lys Ala Phe Leu Ala Asn Arg Arg Ile Ser Gln Ala Val Asp Thr
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Ile Gly Lys Met Leu Phe Pro Ser Val His Ser Gly Leu Ile
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                                105
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ccaatcagcc atctacatca gctcgtgccc gtcttattga tcctggcttt ggaatatata
agatacccag aaagcggtac tctagaaatg aatgtcaagg atcttagacc acgagctaga
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<210> 4156
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<212> PRT
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Asp Leu Pro Ile Ser His Leu His Gln Leu Val Pro Val Leu Leu Ile
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Leu Ala Leu Glu Tyr Ile Arg Tyr Pro Glu Ser Gly Thr Leu Glu Met
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Asn Val Lys Asp Leu Arg Pro Arg Ala Arg Thr Ile Leu Lys Trp Asn
Glu Leu Asn Val Gly Asp Val Val Met Val Asn Tyr Asn Val Glu Ser
                                           60
                        55
Pro Gly Gln Arg Gly Phe Trp Phe Asp Ala Glu Ile Thr Thr Leu Lys
                                        75
                    70
Thr Ile Ser Arg Thr Lys Lys Glu Leu Arg Val Lys Ile Phe Leu Gly
                                   90
Gly Ser Glu Gly Thr Leu Asn Asp Cys Lys Ile Ile Ser Val Asp Glu
                                105
            100
Ile Phe Lys Ile Glu Arg Pro Gly Ala His Pro Leu Ser Phe Ala Asp
                            120
                                                125
        115
Gly Lys Phe Leu Arg Arg Asn Asp Pro Glu Cys Asp Leu Cys Gly Gly
                       135
Asp Pro Glu Lys Lys Cys His Ser Cys Ser Cys Arg Val Cys Gly Gly
                                        155
                    150
Lys His Glu Pro Asn Met Gln Leu Leu Cys Asp Glu Cys Asn Val Ala
                                   170
                165
Tyr His Ile Tyr Cys Leu Asn Pro Pro Leu Asp Lys Val Pro Glu Glu
                               185
Glu Tyr Trp Tyr Cys Pro Ser Cys Lys Thr Asp Ser Ser Glu Val Val
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                           200
Lys Ala Gly Glu Arg Leu Lys Met Ser Lys Lys Ala Lys Met Pro
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Ser Ala Ser Thr Glu Ser Arg Arg Asp
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	atatccatcc 600	caggtgcact	ggcctttgat	gcctggcttg	agcacaccac	tgagatgcta
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	900		,		cacgtagaaa	
	960				acaaactccg	
	1020				ccctggtgaa	
	1080				agagtctgga	
	1140	•			cagtacctct	
	1200				gccggagggg	·
	1260				caagaaaacg	
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	1440				ctcgggagaa	
	1500				ggagggaaa	
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	L980 ·				aggatcatct	
2	2040				cagtgaggac	
2	2100				caaggagacc	
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3300
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Thr Arg Arg Cys Met Leu Ile Leu Gly Ile Pro Glu Asp Cys Gly Glu
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25
           20
Asp Glu Phe Glu Glu Thr Leu Gln Glu Ala Cys Arg His Leu Gly Arg
                          40
Tyr Arg Val Ile Gly Arg Met Phe Arg Arg Glu Glu Asn Ala Gln Ala
                      55
                                          60.
Ile Leu Leu Glu Leu Ala Gln Asp Ile Asp Tyr Ala Leu Leu Pro Arg
                                      75
Glu Ile Pro Gly Lys Gly Gly Pro Trp Glu Val Ile Val Lys Pro Arg
                                  90
Asn Ser Asp Gly Glu Phe Leu Asn Arg Leu Asn Arg Phe Leu Glu Glu
                              105
           100
Glu Arg Arg Thr Val Ser Asp Met Asn Arg Val Leu Gly Ser Asp Thr
                          120
                                              125
Asn Cys Ser Ala Pro Arg Val Thr Ile Ser Pro Glu Phe Trp Thr Trp
                      135
                                          140
Ala Gln Thr Leu Gly Ala Ala Val Gln Pro Leu Leu Glu Gln Met Leu
                   150
                                      155
Tyr Arg Glu Leu Arg Val Phe Ser Gly Asn Thr Ile Ser Ile Pro Gly
                                   170
               165
Ala Leu Ala Phe Asp Ala Trp Leu Glu His Thr Thr Glu Met Leu Gln
          180
                              185
Met Trp Gln Val Pro Glu Gly Glu Lys Arg Arg Arg Leu Met Glu Cys
                           200
Leu Arg Gly Pro Ala Leu Gln Val Val Ser Gly Leu Arg Ala Ser Asn
                    215
                                          220
Ala Ser Ile Thr Val Glu Glu Cys Leu Ala Ala Leu Gln Gln Val Phe
                 230
                                       235
Gly Pro Val Glu Ser His Lys Ile Ala Gln Val Lys Leu Cys Lys Ala
               245
                                  250
Tyr Gln Glu Ala Gly Glu Lys Val Ser Ser Phe Val Leu Arg Leu Glu
                              265
Pro Leu Leu Gln Arg Ala Val Glu Asn Asn Val Val Ser Arg Arg Asn
                          280
Val Asn Gln Thr Arg Leu Lys Arg Val Leu Ser Gly Ala Thr Leu Pro
                      295
Asp Lys Leu Arg Asp Lys Leu Lys Leu Met Lys Gln Arg Arg Lys Pro
                                      315
Pro Gly Phe Leu Ala Leu Val Lys Leu Leu Arg Glu Glu Glu Trp
                                   330
Glu Ala Thr Leu Gly Pro Asp Arg Glu Ser Leu Glu Gly Leu Glu Val
                               345
          340
Ala Pro Arg Pro Pro Ala Arg Ile Thr Gly Val Gly Ala Val Pro Leu
                           360
Pro Ala Ser Gly Asn Ser Phe Asp Ala Arg Pro Ser Gln Gly Tyr Arg
                       375
Arg Arg Arg Gly Arg Gly Gln His Arg Arg Gly Gly Val Ala Arg Ala
                   390
                                       395
Gly Ser Arg Gly Ser Arg Lys Arg Lys Arg His Thr Phe Cys Tyr Ser
                                   410
Cys Gly Glu Asp Gly His Ile Arg Val Gln Cys Ile Asn Pro Ser Asn
                               425
Leu Leu Leu Val Lys Gln Lys Lys Gln Ala Ala Val Glu Ser Gly Asn
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Gly Asn Trp Ala Trp Asp Lys Ser His Pro Lys Ser Lys Ala Lys
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455

460

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Pro Trp Val Asn Asp Gln Asp Val Pro Phe Cys Pro Asp Cys Gly Asn
       35
                           40
Lys Phe Ser Ile Arg Asn Arg His His Cys Arg Leu Cys Gly Ser
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                                           60
Ile Met Cys Lys Lys Cys Met Glu Leu Ile Ser Leu Pro Leu Ala Asn
                                       75
                   70
Lys Leu Thr Ser Ala Ser Lys Glu Ser Leu Ser Thr His Thr Ser Pro
               85
                                   90
Ser Gln Ser Pro Asn Ser Val His Gly Ser Arg Arg Gly Ser Ile Ser
                              105
Ser Met Ser Ser Val Ser Ser Val Leu Asp Glu Lys Asp Asp Asp Arg
            120
Ile Arg Cys Cys Thr His Cys Lys Asp Thr Leu Leu Lys Arg Glu Gln
                       135
Gln Ile Asp Glu Lys Glu His Thr Pro Asp Ile Val Lys Leu Tyr Glu
                                      155
Lys Leu Arg Leu Cys Met Glu Lys Val Asp Gln Lys Ala Pro Glu Tyr
                                   170
               165
Ile Arg Met Ala Ala Ser Leu Asn Ala Gly Glu Thr Thr Tyr Ser Leu
                               185
Glu His Ala Ser Asp Leu Arg Val Glu Val Gln Lys Val Tyr Glu Leu
                           200
                                    205
Ile Asp Ala Leu Ser Lys Lys Ile Leu Thr Leu Gly Leu Asn Gln Asp
                       215
                                           220
Pro Pro Pro His Pro Ser Asn Leu Arg Leu Gln Arg Met Ile Arg Tyr
                                       235
                   230
Ser Ala Thr Leu Phe Val Gln Glu Lys Leu Leu Gly Leu Met Ser Leu
               245
                                   250
Pro Thr Lys Glu Gln Phe Glu Glu Leu Lys Lys Lys Arg Lys Glu Glu
                                                   270
Met Glu Arg Lys Arg Ala Val Glu Arg Gln Ala Ala Leu Glu Ser Gln
Arg Arg Leu Glu Glu Arg Gln Ser Gly Leu Ala Ser Arg Ala Ala Asn
                       295
                                           300
Gly Glu Val Ala Ser Leu Arg Arg Gly Pro Ala Pro Leu Lys Lys Ala
                   310
                                       315
Glu Gly Trp Leu Pro Leu Ser Gly Gly Gln Gly Gln Ser Glu Asp Ser
                325
                                   330
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Arg Ala Asn Pro Gly Glu Ile Ile Thr Ile Ser Phe Gln Asp Phe Asp
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Tyr Lys Asn Ile Glu Ser Tyr Arg Ala Cys Gly Ser Thr Ile Pro Pro
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Pro Tyr Ile Ser Ser Gln Asp His Ile Trp Ile Arg Phe His Ser Asp
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Asp Asn Ile Ser Arg Lys Gly Phe Arg Leu Ala Tyr Phe Ser Gly Lys
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Ser Glu Glu Pro Asn Cys Ala Cys Asp Gln Phe Arg Cys Gly Asn Gly
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Lys Cys Ile Pro Glu Ala Trp Lys Cys Asn Asn Met Asp Glu Cys Gly
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Asp Ser Ser Asp Glu Glu Ile Cys Ala Lys Glu Ala Asn Pro Pro Thr
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Ala Ala Ala Phe Gln Pro Cys Ala Tyr Asn Gln Phe Gln Cys Leu Ser
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Arg Phe Thr Lys Val Tyr Thr Cys Leu Pro Glu Ser Leu Lys Cys Asp
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Gly Asn Ile Asp Cys Leu Asp Leu Gly Asp Glu Ile Asp Cys Asp Val
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Pro	Asn	Tyr 275	Pro	Asp	Phe	Tyr	Pro 280	Pro	Gly	Ser	Asn	Cys 285	Thr	Trp	Leu
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		Thr	His	Arg 645	Ser	Leu	Phe	Ser	Val 650	Glu		Asp	Asp	Thr 655	Asp
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Asp Phe Asp Val Asn Asp Cys Ser Arg Pro Leu Leu Asp Leu Ala Ser
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Val Arg Pro Ser Asn Arg Asp Gly Pro Cys Glu Arg Cys Gly Ile Val
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Trp Gly Met Lys Gly Ile Pro Val Pro Ser Gly His Pro Gln Ala Asp
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Gly Arg Arg Ala Leu Val Arg Ala Val Gly His Pro Gln Asp Leu Leu
Thr Glu Ala Ser Pro Arg Cys Pro Ala Gly Pro Ser Pro Leu Arg Ser
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Thr Gly Arg Lys Pro Pro Gly Pro Pro Arg Gly Gly Asp Leu Ala Ala
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Pro Val Leu Phe Lys Ala Trp Ala Thr Ser Leu Ala Cys Pro Lys Trp
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Gln Ala Leu Arg Arg Ala Arg Met Val Pro Val Val Gln Gly Ser Pro
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Val Leu Gly Ile Ile Pro Tyr Ala Gly Ile Asp Leu Ala Val Tyr Glu
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Thr Leu Lys Asn Trp Trp Leu Gln Gln Tyr Ser His Asp Ser Ala Asp
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                                    90
Pro Gly Ile Leu Val Leu Leu Ala Cys Gly Thr Ile Ser Ser Thr Cys
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Lys Lys Leu Tyr Ala Gln Glu Tyr Glu Phe Glu Ala Asp Glu Asp Lys
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Ala Asp Val Pro Ala Asp Ile Arg Leu Asn Pro Arg Arg Leu Pro Asp
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Leu	Val	Ser	Ser	Cys	Arg	ser	Arg	PIU.	ALG	315	561			,	320
305					310				<b>_</b>		~1	Dwa	7	7 ~~	
Ile	Asp	Phe	Cys	Leu	Pro	Asn	Pro	GIĀ	Pro	Asp	GIY	PIO	ALG	YIA	Ar 9
				325					330	_		_	_	335	<b>3</b>
Glv	Arg	Lys	Pro	Thr	Lys	Ala	Lys	Arg	Asp	Gly	Pro	Pro	Arg	Pro	arg
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Glv	Ara	Pro	Arg	Ile	Arg	Pro	Leu	Glu	Val	Pro	Thr	Thr	Ala	Gly	Pro
Cry	**** 9	355			_		360					365			
71-	c	חלכ	Car	Thr	Pro	Thr		Glv	Ala	Lys	Lys	Pro	Arg	Gly	Arg
Ala		ALA	Jei	1111	110	375	<sub>P</sub>	1		•	380		_		
_	370		_	<b>a</b> 1	Arg	7	<b>11</b>	C1	Glu	e F A		Glv	Thr	Ara	Leu
Gly	Arg	Gly	Arg	GTA		гĀЗ	Ald	GIU	GIU	YIG.	O <sub>x</sub> y				400
385					390				_	395	1	D	T	777	
Glu	Pro	Leu	Lys	Pro	Leu	Lys	Ile	Lys		Ser	vaı	Pro	Lys	Ala	Gry
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Glu	Gly	Leu	Gly	Thr	Ser	Ser	Gly	Asp	Ala	Ile	Ser	Gly	Thr	Asp	His
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гàг		Vai	GIU	Giu	цуз	455	110			-1-	460	•			
	450		_					G1	T 1/0	λνα		Dro	Pro	Leu	Tvr
Ser	Phe	Leu	Asp	Pne	Leu	Lys	Ser	GIÀ	гуs	475	nrs	110	110		480
465					470				_	475		<b>a</b>	17-1	D~0	
Gln	Ala	Gly	Leu	Thr	Pro	Pro	Leu	Ser	Pro	Pro	гÀг	ser	vai	PIO	PIO
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Val	120	515	•				520					525			
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GIU			GIU	361	Giu	535		4-7		1	540				
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Lys	Arg	Leu	Asp	GIU		Leu	цуз	Arg	7311	555					560
545					550	_		••- 1	21-			7/20	λον	T.011	
Phe	Ser	Ser	Asp	Glu	Glu	Asp	ser	vaı	Ala	гуя	ASII	Arg	ASP	575	Gln
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Glu	Ser	Ile	Ser	Ser	Ala	Ile	Ser	Ala	Leu	Asp	) Asp	Pro	Pro	Leu	Ala
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Glv	Pro	Lvs	Asp	Thr	Ser	Thr	Pro	Asp	Gly	Pro	) Pro	Leu	Ala	Pro	Ala
		595					600					605	i		
- ומ	. Al=	Val	Pro	Glv	Pro	Pro	Pro	Leu	Pro	Gly	/ Leu	Pro	Ser	Ala	Asn
AIG	610			1		615				_	620	)			
	910	, (1)	. The	. Dro	Glu	Dro	Pro	T.e.i	Lev	Glı	ı Glu	Lys	Pro	Pro	Pro
		ı GIY	THE	PIC			FIG	шси		635		1			640
625	•				630		5	<b>~</b> 2~	Dwa			Dro	Dro	Dro	
Thi	r Pro	Pro	Pro			Thr	Pro	GIN			1 PIC	, PIC	, ,,	655	Pro
			•	645	•				650		_				
Pro	Pro	Pro	Glr	ı Pro	) Ala	Leu	Pro	Ser	Pro	Pro	o Pro	Let	ı va.	L Ala	Pro
			660	)				665	;				670	)	
Thi	r Pro	Ser	Sei	Pro	Pro	Pro	Pro	Pro	Lev	ı Pro	o Pro	Pro	) Pro	Pro	Pro
		675	5				680	)				685	5		
77.	- Mai	- Dro	, Sei	r Dro	Pro	Pro	Pro	Pro	Pro	o Pro	o Ala	a Ala	a Ala	a Pro	Leu
AT			, 261			695					700	)			
_ •	690	J		_ (1)	. (1			- זג	Dr/	Se.			ı Ası	o Pro	Glu
		a Pro	Pro	o GII			, ATS	, ATC	· PI(	J 30.		, 911		·`	720
70	5				710			_		71		_ ~1.	. (1)	, mL.	
Le	u Pro	o Ası	Th	r Arg	g Pro	Lev	ı His	Lev	ı Ala	a Ly	e ra	الناة	ı GI	u III	r Ala

730

725

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Val Ser Ala Gly Gly Ser Ser Ala Pro Pro Pro Lys Ala Pro Ala Pro
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 Pro Gln Ala Trp Asp Asp Ser Leu Ile Asp Ser Ser Pro Leu Leu His
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Asn Gln Asp Arg Ser Ala Leu Lys Asp Thr Tyr Met Leu Ser Ser Thr
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Ser Arg Thr Asn Glu Asn Asp Pro Ala Lys His Gly Asp Gln His Glu
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             55
Gly Gln His Tyr Asn Ile Ser Pro Gln Asp Leu Glu Thr Val Phe Pro
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His Gly Leu Pro Pro Arg Phe Val Met Gln Val Lys Thr Phe Ser Glu
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Ala Cys Leu Met Val Arg Lys Pro Ala Leu Glu Leu Leu His Tyr Leu
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Lys Asn Thr Ser Phe Ala Tyr Pro Ala Ile Arg Tyr Leu Leu Tyr Gly
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Glu Lys Gly Thr Gly Lys Thr Leu Ser Leu Cys His Val Phe His Phe
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Cys Ala Lys Gln Asp Trp Leu Ile Leu His Ile Pro Asp Ala His Leu
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Trp Val Lys Asn Cys Arg Asp Leu Leu Gln Ser Ser Tyr Asn Lys Gln
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Arg Phe Asp Gln Pro Leu Glu Ala Ser Thr Trp Leu Lys Asn Phe Lys
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Thr Thr Asn Glu Arg Phe Leu Asn Gln Ile Lys Val Gln Glu Lys Tyr
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Val Trp Asn Lys Arg Glu Leu Thr Glu Lys Gly Ser Pro Leu Gly Glu
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Val Val Glu Gln Gly Ile Thr Arg Val Arg Asn Ala Thr Asp Ala Val
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Gly Ile Val Leu Lys Glu Leu Lys Arg Gln Ser Ser Leu Gly Met Phe
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His Leu Leu Val Ala Val Asp Gly Ile Asn Ala Leu Trp Gly Arg Thr
 260 265
Thr Leu Lys Arg Glu Asp Lys Ser Pro Ile Ala Pro Glu Glu Leu Ala
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Leu Val His Asn Leu Arg Lys Met Met Lys Asn Asp Trp His Gly Gly
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Ala Ile Val Ser Ala Leu Ser Gln Thr Gly Ser Leu Phe Lys Pro Arg
                                    315
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Lys Ala Tyr Leu Pro Gln Glu Leu Leu Gly Lys Glu Gly Phe Asp Ala
                                 330
Leu Asp Pro Phe Ile Pro Ile Leu Val Ser Asn Tyr Asn Pro Lys Glu
                             345
Phe Glu Ser Cys Ile Gln Tyr Tyr Leu Glu Asn Asn Trp Leu Gln His
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Thr Asp Cys Val Met Ile Ser Thr Arg Leu Val Ser Ser Val His Ala
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Val Leu Ala Thr Gly Ser Gly Ile Val Ile Ile Arg Ser Cys Asp Asp
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Val Ile Thr Gly Arg His Trp Leu Ala Arg Glu Tyr Val Trp Phe Leu
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Ile Pro Tyr Met Ile Tyr Asp Ser Tyr Ala Met Tyr Leu Cys Glu Trp
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Cys Arg Thr Arg Asp Gln Asn Arg Ala Pro Ser Leu Thr Leu Arg Asn
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Phe Leu Ser Arg Asn Arg Leu Met Ile Thr His His Ala Val Ile Leu
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Phe Val Leu Val Pro Val Ala Gln Arg Leu Arg Gly Asp Leu Gly Asp
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Phe Phe Val Gly Cys Ile Phe Thr Ala Glu Leu Ser Thr Pro Phe Val
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                                        155
Ser Leu Gly Arg Val Leu Ile Gln Leu Lys Gln Gln His Thr Leu Leu
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                                    170
Tyr Lys Val Asn Gly Ile Leu Thr Leu Ala Thr Phe Leu Ser Cys Arg
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Ile Leu Leu Phe Pro Phe Met Tyr Trp Ser Tyr Gly Arg Gln Gln Gly
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Leu Ser Leu Leu Gln Val Pro Phe Ser Ile Pro Phe Tyr Cys Asn Val
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Ala Asn Ala Phe Leu Val Ala Pro Gln Ile Tyr Trp Phe Cys Leu Leu
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 Val Gly Gly Ile Ile Gly Gly Ile Val Ala Gly Leu Val Ser Asp Tyr
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 Thr Asn Gly Arg Ala Thr Thr Cys Cys Val Met Leu Ile Leu Ala Ala
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 Pro Met Met Phe Leu Tyr Asn Tyr Ile Gly Gln Asp Gly Ile Ala Ser
  Ser Ile Val Met Leu Ile Ile Cys Gly Gly Leu Val Asn Gly Pro Tyr
                                  105
 Ala Xaa Ile Thr Thr Ala Val Ser Ala Asp Leu Gly Thr His Lys Ser
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 Leu Lys Gly Asn Ala Lys Ala Leu Ser Thr Val Thr Ala Ile Ile Asp
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                         135
 Gly Thr Gly Ser Ile Gly Ala Ala Leu Gly Pro Leu Leu Ala Gly Leu
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                                          155
  Ile Ser Pro Thr Gly Trp Asn Asn Val Phe Tyr Met Leu Ile Ser Ala
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  Asp Val Leu Ala Cys Leu Leu Leu Cys Arg Leu Val Tyr Lys Glu Ile
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Gln Ser Pro Ala Gly Tyr Met Pro Tyr Ser His Pro Ser Ser Tyr Thr
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Thr His Pro Gln Met Gln Gln Ala Ser Val Ser Ser Pro Ile Val Ala
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                                        75
Gly Gly Leu Arg Asn Ile His Asp Asn Lys Val Ser Gly Pro Leu Ser
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Gly Asn Ser Ala Asn His His Ala Asp Asn Pro Arg His Gly Ser Ser
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Glu Asp Tyr Leu His Met Val His Arg Leu Ser Ser Asp Asp Gly Asp
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Ser Ser Thr Met Arg Asn Ala Ala Ser Phe Pro Leu Arg Ser Pro Gln
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Pro Val Cys Ser Pro Ala Gly Ser Glu Gly Thr Pro Lys Gly Ser Arg
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Pro Pro Leu Ile Leu Gln Ser Gln Ser Leu Pro Cys Ser Ser Pro Arg
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Asp Val Pro Pro Asp Ile Leu Leu Asp Ser Pro Glu Arg Lys Gln Lys
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Lys Gln Lys Lys Met Lys Leu Gly Lys Asp Glu Lys Glu Gln Ser Glu
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Lys Ala Ala Met Tyr Asp Ile Ile Ser Ser Pro Ser Lys Asp Ser Thr
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Lys Leu Thr Leu Arg Leu Ser Arg Val Arg Ser Ser Asp Met Asp Gln
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Gln Glu Asp Met Leu Ser Gly Met Glu Asn Ser Asn Val Ser Glu Asn
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Asp Ile Pro Phe Asn Val Gln Tyr Gln Gly Gln Thr Ser Lys Thr Pro
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Ile Thr Pro Gln Asp Val Asn Arg Pro Leu Asn Ala Ala Gln Cys Leu
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Ser Gln Gln Glu Gln Thr Ala Phe Leu Pro Ala Asn Gln Val Pro Val
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Leu Gln Gln Asn Thr Ser Val Ala Thr Lys Gln Pro Gln Thr Ser Val
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Val Gln Asn Gln Gln Gln Ile Ser Gln Gln Gly Pro Ile Tyr Asp Glu
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                                    330
Val Glu Leu Asp Ala Leu Ala Glu Ile Glu Arg Ile Glu Arg Glu Ser
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Ala Ile Glu Arg Glu Arg Phe Ser Lys Glu Val Gln Asp Lys Asp Lys
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Pro Leu Lys Lys Lys
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Thr Ile Asp Trp Asn Glu Trp Arg Asp Tyr His Leu Leu His Pro Val
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Glu Asn Ile Pro Glu Ile Ile Leu Tyr Trp Lys His Ser Thr Ile Phe
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Asp Val Gly Glu Asn Leu Thr Val Pro Asp Glu Phe Thr Val Glu Glu
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Arg Gln Thr Gly Met Trp Trp Arg His Leu Val Ala Gly Gly Gly Ala
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Gly Asn Gly Ile Asn Val Leu Lys Ile Ala Pro Glu Ser Ala Ile Lys
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Phe Met Ala Tyr Glu Gln Ile Lys Arg Leu Val Gly Ser Asp Gln Glu
                                185
Thr Leu Arg Ile His Glu Arg Leu Val Ala Gly Ser Leu Ala Gly Ala
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Ile Ala Gln Ser Ser Ile Tyr Pro Met Glu Val Leu Lys Thr Arg Met
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Ala Leu Arg Lys Thr Gly Gln Tyr Ser Gly Met Leu Asp Cys Ala Arg
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Arg Ile Leu Ala Arg Glu Gly Val Ala Ala Phe Tyr Lys Gly Tyr Val
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250

Pro Asn Met Leu Gly Ile Ile Pro Tyr Ala Gly Ile Asp Leu Ala Val

245

255

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Tyr Glu Thr Leu Lys Asn Ala Trp Leu Gln His Tyr Ala Val Asn Ser
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Ala Asp Pro Gly Val Phe Val Leu Leu Ala Cys Gly Thr Met Ser Ser
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                                            300
Thr Cys Gly Gln Leu Ala Ser Tyr Pro Leu Ala Leu Val Arg Thr Arg
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Met Gln Ala Gln Ala Ser Ile Glu Gly Ala Pro Glu Val Thr Met Ser
                                    330
                325
Ser Leu Phe Lys His Ile Leu Arg Thr Glu Gly Ala Phe Gly Leu Tyr
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            340
Arg Gly Leu Ala Pro Asn Phe Met Lys Val Ile Pro Ala Val Ser Ile
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Ser Tyr Val Val Tyr Glu Asn Leu Lys Ile Thr Leu Gly Val Gln Ser
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Val Asp Ser Ala Gly Thr Gly Asp Leu Ser Tyr Gly Tyr Gln Gly Arg
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Ser Phe Glu Pro Val Gly Thr Arg Pro Arg Val Asp Ser Met Ser Ser
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Val Glu Glu Asp Asp Tyr Asp Thr Leu Thr Asp Ile Asp Ser Asp Lys
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Asn Val Ile Arg Thr Lys Gln Tyr Leu Tyr Val Ala Asp Leu Ala Arg
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Lys Asp Lys Arg Val Leu Arg Lys Lys Tyr Gln Ile Tyr Phe Trp Asn
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Ile Ala Thr Ile Ala Val Phe Tyr Ala Leu Pro Val Val Gln Leu Val
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Ile Thr Tyr Pro Glu Xaa Gly Gly Cys Thr Arg Gly Ser Arg Asp Ile
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Cys Ser Ser Asn Phe Leu Cys Ala His Pro Leu Gly Asn Leu Ser Ala
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Phe Asn Asn Ile Leu Ser Asn Leu Gly Tyr Ile Leu Leu Gly Leu Leu
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Phe Leu Leu Ile Ile Leu Gln Arg Glu Ile Asn His Asn Arg Ala Leu
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Leu Arg Asn Asp Leu Cys Ala Leu Glu Cys Gly Ile Pro Lys His Phe
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                                            220
Gly Leu Phe Tyr Ala Met Gly Thr Ala Leu Met Met Glu Gly Leu Leu
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Asp Glu Thr Asn Lys Gly Thr Lys Thr Glu Gly Glu Thr Glu Val Lys
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Lys Asp Glu Ala Gly Glu Asn Tyr Ser Lys Asp Gln Gly Gly Arg Thr
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Lys Asp Asp Met Asp Leu Glu Leu Val Leu Met Cys Lys Asp Lys Pro
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Thr Glu Thr Leu Leu Asn Thr Val Lys Asp Asn Leu Pro Ile Gln Ile
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Gln Lys Leu Thr Glu Glu Lys Tyr Gln Val Glu Gln Cys Val Asn Glu
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Ala Ser Ile Ile Ile Arg Asn Thr Lys Glu Pro Thr Leu Thr Leu Lys
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Val Ile Leu Thr Ser Pro Leu Ile Arg Asp Glu Leu Glu Lys Lys Asp
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Gly Glu Asn Val Ser Met Lys Asp Pro Pro Asp Leu Leu Asp Arg Gln
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Lys Cys Leu Asn Ala Leu Ala Ser Leu Arg His Ala Lys Trp Phe Gln
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Ala Arg Ala Asn Gly Leu Lys Ser Cys Val Ile Val Leu Arg Ile Leu
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Arg Asp Leu Cys Asn Arg Val Pro Thr Trp Ala Pro Leu Lys Gly Trp
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Pro Leu Glu Leu Ile Cys Glu Lys Ser Ile Gly Thr Cys Asn Arg Pro
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Gly Ile Leu Leu Pro Gly Gly Pro Gly Leu His Asp Pro Cys Glu Arg
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Asp Pro Thr Asp Ala Leu Ser Tyr Met Thr Ile Gln Gln Lys Glu Asp
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Ile Thr His Ser Ala Gln His Ala Leu Arg Leu Ser Ala Phe Gly Gln
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Ile Tyr Lys Val Leu Glu Met Asp Pro Leu Pro Ser Ser Lys Pro Phe
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Gln Lys Tyr Ser Trp Ser Val Thr Asp Lys Glu Gly Ala Gly Ser Ser
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Ser Asp Glu Lys Arg Arg Gly Leu Lys Tyr Glu Leu Ile Ser Glu Thr
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Ala Ser Ile Ala Thr Ala Ser Ala Ser Ala Gln Ala Arg Asn His Val
Asp Ala Gln Val Gln Thr Glu Ala Pro Val Pro Val Ser Val Gln Pro
Pro Ser Gln Tyr Asp Ile Pro Arg Leu Ala Ala Phe Leu Arg Arg Val
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Glu Ala Met Val Ile Arg Glu Leu Asn Lys Asn Trp Gln Ser His Ala
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Phe Asp Gly Phe Glu Val Asn Trp Thr Glu Gln Gln Met Val Ser
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Cys Ala Trp Asn Leu Asp Arg Arg Asp Leu Arg Pro Gln Gln Pro Ser
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Ala Val Val Glu Val Pro Ser Ala Val Leu Cys Leu Ala Phe His Pro
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Val Trp Asp Leu Ser Arg Leu Glu Asp Pro Leu Leu Trp Arg Thr Gly
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Leu Thr Asp Asp Thr His Thr Asp Pro Val Ser Gln Val Val Trp Leu
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Pro Glu Pro Gly His Ser His Arg Phe Gln Val Leu Ser Val Ala Thr
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Asp Gly Lys Val Leu Leu Trp Gln Gly Ile Gly Val Gly Gln Leu Gln
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Lys Tyr Leu Phe Ala Val Arg Trp Ser Pro Val Arg Pro Leu Val Phe
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Ser Ser Gln Lys Pro Thr Val Leu Ile Lys Gln Thr Gln Asp Glu Ser
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Pro Val Tyr Cys Leu Glu Phe Asn Ser Gln Gln Thr Gln Leu Leu Ala
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Arg Asp Gln Gly Ser Ser Ala Leu Ser Gly Val Gly Gly Ile Arg Leu
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                                                 110
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Pro Asn Gly Lys Leu Lys Cys Asp Ile Cys Gly Ile Ile Cys Ile Gly
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Pro Asn Val Leu Met Val His Lys Arg Ser His Thr Gly Glu Arg Pro
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                                          140
Phe Gln Cys Asn Gln Cys Gly Ala Ser Phe Thr Gln Lys Gly Asn Leu
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                  150
Leu Arg His Ile Lys Leu His Ser Gly Glu Lys Pro Phe Lys Cys His
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              165
Leu Cys Asn Tyr Ala Cys Arg Arg Arg Asp Ala Leu Thr Gly His Leu
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Arg Thr His Ser Val Gly Lys Pro His Lys Cys Gly Tyr Cys Gly Arg
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                          200
Ser Tyr Lys Gln Arg Ser Ser Leu Glu Glu His Lys Glu Arg Cys His
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Asn Tyr Leu Glu Ser Met Gly Leu Pro Gly Thr Leu Tyr Pro Val Ile
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Lys Glu Glu Thr Asn His Ser Glu Met Ala Glu Asp Leu Cys Lys Ile
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Gly Ser Glu Arg Ser Leu Val Leu Asp Arg Leu Ala Ser Asn Val Ala
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Lys Arg Lys Ser Ser Met Pro Gln Lys Phe Leu Gly Asp Lys Gly Leu
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Ser Asp Thr Pro Tyr Asp Ser Ser Ala Ser Tyr Glu Lys Glu Asn Glu
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Met Met Lys Ser His Val Met Asp Gln Ala Ile Asn Asn Ala Ile Asn
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 Tyr Leu Gly Ala Glu Ser Leu Arg Pro Leu Val Gln Thr Pro Pro Gly
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Gly Ser Glu Val Val Pro Val Ile Ser Pro Met Tyr Gln Leu His Lys
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345

Pro Leu Ala Glu Gly Thr Pro Arg Ser Asn His Ser Ala Gln Asp Ser

340

350

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Ala Val Glu Asn Leu Leu Leu Ser Lys Ala Lys Leu Val Pro Ser
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Glu Arg Glu Ala Ser Pro Ser Asn Ser Cys Gln Asp Ser Thr Asp Thr
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Glu Ser Asn Asn Glu Glu Gln Arg Ser Gly Leu Ile Tyr Leu Thr Asn
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His Ile Ala Pro His Ala Arg Asn Gly Leu Ser Leu Lys Glu Glu His
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Arg Ala Tyr Asp Leu Leu Arg Ala Ala Ser Glu Asn Ser Gln Asp Ala
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                            440
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Leu Arg Val Val Ser Thr Ser Gly Glu Gln Met Lys Val Tyr Lys Cys
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Glu His Cys Arg Val Leu Phe Leu Asp His Val Met Tyr Thr Ile His
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Met Gly Cys His Gly Phe Arg Asp Pro Phe Glu Cys Asn Met Cys Gly
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Glu His Arg Phe His Met Ser
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250

245

255

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His Cys Ala Met Gly Val Ser Arg Ser Ala Thr Leu Val Leu Ala Phe
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Leu Met Ile Tyr Glu Asn Met Thr Leu Val Glu Ala Ile Gln Thr Val
                                                285
                            280
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Gln Ala His Arg Asn Ile Cys Pro Asn Ser Gly Phe Leu Arg Gln Leu
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Asn Trp Ser Ser Ala Arg Asn Ser Ala Ser Ala Ala Glu Ala Arg Ser
Met Ala Leu Pro Thr Gln Ala Gln Val Val Ile Cys Gly Gly Gly Ile
Thr Gly Thr Ser Val Ala His His Gln Ser Lys Met Gly Trp Lys Asp
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Ile Val Leu Leu Glu Gln Gly Arg Leu Ala Ala Gly Ser Thr Arg Phe
Cys Ala Gly Ile Leu Ser Thr Ala Arg His Leu Thr Ile Glu Gln Lys
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Met Ala Asp Tyr Ser Asn Lys Leu Tyr Tyr Gln Leu Glu Gln Glu Thr
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Gly Ile Gln Thr Gly Tyr Thr Arg Thr Gly Ser Ile Phe Leu Ala Gln
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Thr Gln Asp Arg Leu Ile Ser Leu Lys Arg Ile Asn Ala Gly Leu Lys
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Tyr Val Arg Val
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 Lys Thr Thr Phe Val Asn Val Ile Ala Ser Gly Gln Phe Ser Glu Asp
                            40
 Met Ile Pro Thr Val Gly Phe Asn Met Arg Lys Val Thr Lys Gly Asn
                      , 55
 Val Thr Ile Lys Ile Trp Asp Ile Gly Gly Gln Pro Arg Phe Arg Ser
                                        75
                    70
 Met Trp Glu Arg Tyr Cys Arg Gly Val Asn Ala Ile Val Tyr Met Ile
                                    90
                85
 Asp Ala Ala Asp Arg Glu Lys Ile Glu Ala Ser Arg Asn Glu Leu His
                                                   110
                                105
 Asn Leu Leu Asp Lys Pro Gln Leu Gln Gly Ile Pro Val Leu Val Leu
                                               125
                            120
 Gly Asn Lys Arg Asp Leu Pro Gly Ala Leu Asp Glu Lys Glu Leu Ile
 Glu Lys Met Asn Leu Ser Ala Ile Gln Asp Arg Glu Ile Cys Cys Tyr
                                        155
                     150
 Ser Ile Ser Cys Lys Glu Lys Asp Asn Ile Asp Ile Thr Leu Gln Trp
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 Leu Ile Gln His Ser Lys Ser Arg Arg Ser
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Ser Phe Ala Ser Leu Leu Asn Tyr Arg Asn Ile Trp Lys Asn Leu Leu
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Ile Leu Gly Phe Thr Asn Phe Ile Ala His Ala Ile Arg His Cys Tyr
Gln Pro Val Gly Gly Gly Ser Pro Ser Asp Phe Tyr Leu Cys Ser
Leu Leu Ala Ser Gly Xaa Ala Ala Leu Ala Cys Val Phe Leu Gly Val
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Thr Val Asp Arg Phe Gly Arg Arg Gly Ile Leu Leu Leu Ser Met Thr
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Leu Thr Gly Ile Ala Ser Leu Val Leu Leu Gly Leu Trp Asp Tyr Leu
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Asn Glu Ala Ala Ile Thr Thr Phe Ser Val Leu Gly Leu Phe Ser Ser
                            120
Gln Ala Ala Ala Ile Leu Ser Thr Leu Leu Ala Ala Glu Val Ile Pro
                        135
Thr Thr Val Arg Gly Arg Gly Leu Gly Leu Ile Met Ala Leu Gly Ala
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                    150
Leu Gly Gly Leu Ser Gly Pro Ala Gln Arg Leu His Met Gly His Gly
                                    170
Ala Phe Leu Gln His Val Val Leu Ala Ala Cys Ala Leu Leu Cys Ile
                                                     190
                                185
            180
Leu Ser Ile Met Leu Leu Pro Glu Thr Lys Arg Lys Leu Leu Pro Glu
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                                                 205
Val Leu Arg Asp Gly Glu Leu Cys Arg Arg Pro Ser Leu Leu Arg Gln
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Pro Thr Pro Thr Arg Cys Asp His Val Pro Leu Leu Ala Thr Pro Asn
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                              25
Tyr Thr Val Val Pro Phe Val Leu Leu Ser Ile Lys Pro Ser Leu Thr
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240
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Arg	Glu			Leu	Arg	Phe		Asp	Met	Glu	Cys			GIY	Glu
	_	675				<b>-</b> 1-	680	C	Dho	C+-=	C 0 ==	685		Cve	Acn
Ile			Ala	Arg	Ala	695		Sei	Pne	Cys	700		116	Cys	Asp
Dwa	690		· The	· Glu	r Ala			Gln	Thr	Tro			Phe	Glu	Val
705		1111		Gry	710		110	0		715					720
Ara	His	Glv	Asn	Glu			Ile	Arg	Glu	Met	Leu	Arg	Ile	Arg	Arg
_				725	i		•		730	1				735	
Ser	Val	Glr	Ala	Thr	туг	Asn	Thr	Gln	Val	Asn	Phe	Met	Ala	Ser	Gln
			740	)				745					750	1	
Met	Leu	Lys	val	Ser	- Gly	Ser			Gly	Thr	Val			Leu	Ala
		755				_	760		_		-	765		<b>7</b> 1	
Pro	Gly	Glr	ı Ser	Gly	7 Met	. Asp	Asp	Met	Lys	ь Leu	. ьеи	GIU	GIN	Arg	Ala

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770
                        775
                                            780
Glu Gln Leu Ala Ala Glu Ala Glu Arg Asp Gln Pro Leu Arg Ala Gln
                    790
                                        795
Ser Lys Ile Leu Phe Val Arg Ser Asp Ala Ser Arg Glu Glu Leu Ala
                805
                                    810
Glu Leu Ala Gln Gln Val Asn Pro Glu Glu Ile Gln Leu Gly Glu Asp
            82.0
                                825
                                                     830
Glu Asp Glu Asp Glu Met Asp Leu Glu Pro Asn Glu Val Arg Leu Glu
                            840
Gln Gln Ser Val Pro Ala Ala Val Phe Gly Ser Leu Lys Glu Asp
                        855
<210> 4211
<211> 456
<212> DNA
<213> Homo sapiens
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ggggateget agececcage ttetcagaac taaatatgaa agetettget egtetaeget
tagttacaac agacteeetg ggeetaetgt aggggteaag ageagattte cagactetea
agetggaaaa gagaegetee acaetgegae gacaaccaac acatgggaca agetgagaaa
gtgcactcag gacttcgcgt gatgtcacca ccatggcaat acttagatcc tgttgcttaa
gcataccatg tcgctgaaag agggaaagaa aatgaaagag cgtcctttaa aaagacgtaa
300
aattacactt tcactactac tggttcctat ccttgtgcag taaagtacaa cctggccagg
gtttaccage tetacetgea aetgagteag aaaggeaaag tagteagett tgtecatget
gtacggaatt tgctccacaa acccccttgc tctaga
<210> 4212
<211> 81
<212> PRT
<213> Homo sapiens
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Met Leu Lys Gln Gln Asp Leu Ser Ile Ala Met Val Val Thr Ser Arg
Glu Val Leu Ser Ala Leu Ser Gln Leu Val Pro Cys Val Gly Cys Arg
            20
Arg Ser Val Glu Arg Leu Phe Ser Ser Leu Arg Val Trp Lys Ser Ala
Leu Asp Pro Tyr Ser Arg Pro Arg Glu Ser Val Val Thr Lys Arg Arg
Arg Ala Arg Ala Phe Ile Phe Ser Ser Glu Lys Leu Gly Ala Ser Asp
65
                    70
                                        75
Pro
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 <211> 383
 <212> DNA
 <213> Homo sapiens
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atggaggcac gcgagggcat gcacctcaag aacgtggact tccgtgagtt catggtggcc
ttcccggacc cggcccggcc gccctggtac gcctgctcgt cggccttctg ggccgcggcg
ctgctcacgc tgtcgtggcc gctgcgagtg ctggccgagt accgcacggc ctacgcgcac
taccacgtgg agaagctgtt tggcctggag ggcccgggct cggccagcag cgcaggcggt
ggcctcagcc ccagcgatga gctgctgccc ccgctcaccc accgcctgcc gcgggtcaac
360
,acagtagaca gcacggagct cgg
383
<210> 4214
<211> 127
<212> PRT
<213> Homo sapiens
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Xaa Ala Tyr Leu Cys Gln Arg Ala Arg Phe Phe Ala Glu Asn Glu Gly
                                     10
Leu Asp Asp Tyr Met Glu Ala Arg Glu Gly Met His Leu Lys Asn Val
            20
                                 25
Asp Phe Arg Glu Phe Met Val Ala Phe Pro Asp Pro Ala Arg Pro Pro
                             40
Trp Tyr Ala Cys Ser Ser Ala Phe Trp Ala Ala Ala Leu Leu Thr Leu
Ser Trp Pro Leu Arg Val Leu Ala Glu Tyr Arg Thr Ala Tyr Ala His
Tyr His Val Glu Lys Leu Phe Gly Leu Glu Gly Pro Gly Ser Ala Ser
                85
Ser Ala Gly Gly Leu Ser Pro Ser Asp Glu Leu Leu Pro Pro Leu
                                 105
Thr His Arg Leu Pro Arg Val Asn Thr Val Asp Ser Thr Glu Leu
        115 .
 <210> 4215
 <211> 939
 <212> DNA
 <213> Homo sapiens
<400> 4215
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ctggaagaaa gcaaagaaat ggatatcaaa cgtaaagaaa ataaaggcaa tgatacccct
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ttggccctag agagtacaaa cactgaaaag gagacaagcc tggaggaaac aaaaatcggg

gagateetga teeagggett gacagaagat atggtgaetg ttttaateeg ggeetgegtg

agcatgctgg gagtccctgt ggacccagat actttgcatg ccaccctttg tttctgtttg

180

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agggtcactc ggggccccca attagccatg atgtttgcag aactgaagaa tacccgcatg
360
atcttgaatt tgacccagag ctcaggcttc aatgggttta ctcccctggt cacccttctc
ttaagacaca tcattgagga cccctgtacc cttcgtcata ccatggaaaa ggttgttcgc
tcagcagcta caagtggagc tggtagcact acctctggtg ttgtgtctgg cagcctcggc
tctcgggaga tcaactacat ccttcgtgtc cttgggccag ccgcatgccg caatccagac
atattcacag aagtggccaa ctgctgtatc cgcatcgccc ttcctgcccc tcgaggctca
ggaactgett cagatgatga atttgagaat ettagaatta aaggeeetaa tgetgtacag
ctggtgaaga ccaccccttt gaagccctca cctctgcctg tcatccctga tactatcaag
gaagtgatet atgatatget gaatgetetg getgeatace atgeteeaga ggaageagat
aaatctgatc ctaaacctgg ggttatgacc caagaggttg gccagctcct gcaagacatg
ggtgatgatg tataccagca gtaccggtca cttacgcgt
<210> 4216
<211> 287
<212> PRT
<213> Homo sapiens
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Met Asp Ile Lys Arg Lys Glu Asn Lys Gly Asn Asp Thr Pro Leu Ala
Leu Glu Ser Thr Asn Thr Glu Lys Glu Thr Ser Leu Glu Glu Thr Lys
Ile Gly Glu Ile Leu Ile Gln Gly Leu Thr Glu Asp Met Val Thr Val
                             40
Leu Ile Arg Ala Cys Val Ser Met Leu Gly Val Pro Val Asp Pro Asp
                         .55
Thr Leu His Ala Thr Leu Cys Phe Cys Leu Arg Val Thr Arg Gly Pro
                     70
65
Gln Leu Ala Met Met Phe Ala Glu Leu Lys Asn Thr Arg Met Ile Leu
                                     90
Asn Leu Thr Gln Ser Ser Gly Phe Asn Gly Phe Thr Pro Leu Val Thr
                                 105
             100
 Leu Leu Leu Arg His Ile Ile Glu Asp Pro Cys Thr Leu Arg His Thr
                                                 125
                             120
 Met Glu Lys Val Val Arg Ser Ala Ala Thr Ser Gly Ala Gly Ser Thr
                         135
 Thr Ser Gly Val Val Ser Gly Ser Leu Gly Ser Arg Glu Ile Asn Tyr
```

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150
                                        155
Ile Leu Arg Val Leu Gly Pro Ala Ala Cys Arg Asn Pro Asp Ile Phe
                                    170
               165
Thr Glu Val Ala Asn Cys Cys Ile Arg Ile Ala Leu Pro Ala Pro Arg
                                185
Gly Ser Gly Thr Ala Ser Asp Asp Glu Phe Glu Asn Leu Arg Ile Lys
                            200
Gly Pro Asn Ala Val Gln Leu Val Lys Thr Thr Pro Leu Lys Pro Ser
                        215
                                            220
Pro Leu Pro Val Ile Pro Asp Thr Ile Lys Glu Val Ile Tyr Asp Met
                    230
Leu Asn Ala Leu Ala Ala Tyr His Ala Pro Glu Glu Ala Asp Lys Ser
                                    250
                245
Asp Pro Lys Pro Gly Val Met Thr Gln Glu Val Gly Gln Leu Leu Gln
                                                    270Met Gly Asp Asp
                                265
           260
Val Tyr Gln Gln Tyr Arg Ser Leu Thr Arg
                                                285
        275
                            280
<210> 4217
<211> 619
<212> DNA
<213> Homo sapiens
<400> 4217
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catacacaca cacacccctc agtcataggc tcacaagagt ctctcttgtc tctctctat
acatacacac acacacacaa ccagccacaa gcccacaaag gtgtctctct ctttgtccct
qtctqctctc tcqcactcac acacacacat ctcaqccaca ggcccaccag agtctgtctg
tetetttgte teteteacte teteteacae acatacacet cagecacagg cecacaaggg
tetetetet tgtecetgge teetetetet egeacactee cacacacaca catacagete
agccacagge ccacgagggt gtctctctct ctctctct ctcacacaca cacacaca
cacacacgcc tgtgcagctc cacaggggcc tggggcagga gacagatctg aatacacata
ccaccetgtg etgtgagtgg ccacteccat ccaacaactg agactttetg ttactgggce
aaggttttct gccaaactca cttcccttat aatgaatgaa ttatccctca gaaggttcca
cagtcctccc ctggcgcgc
619
<210> 4218
<211> 155
<212> PRT
<213> Homo sapiens
<400> 4218
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Met His Thr Tyr Thr His Thr Pro Leu Ser His Arg Leu Thr Arg Val

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10
Ser Leu Val Ser Leu Ser Tyr Ile His Thr His Thr Gln Pro Ala Thr
                                25
Gly Pro Gln Arg Cys Leu Ser Leu Cys Pro Cys Leu Leu Ser Arg Thr
                            40
His Thr His Thr Ser Gln Pro Gln Ala His Gln Ser Leu Ser Val Ser
Leu Ser Leu Ser Leu Thr His Ile His Leu Ser His Arg Pro
Thr Arg Val Ser Leu Leu Val Pro Gly Ser Ser Leu Ser His Thr Pro
                                    90
Thr His Thr His Thr Ala Gln Pro Gln Ala His Glu Gly Val Ser Leu
                                105
           100
Ser Leu Ser Leu Ser His Thr His Thr His Thr His Thr Pro Val Gln
                            120 _
Leu His Arg Gly Leu Gly Gln Glu Thr Asp Leu Asn Thr His Thr Thr
                        135
Leu Cys Cys Glu Trp Pro Leu Pro Ser Asn Asn
145
<210> 4219
<211> 774
<212> DNA
<213> Homo sapiens
<400> 4219
ngeggeegeg caectgetee egtegeeeta cageaagate aegeeeeege ggaggeeeca
ccgctgcagc agcggccacg gcagcgacaa cagcagcgtg ctgagcgggg agctcccgcc
gqccatgggg aagacggccc tgttctacca cagcggcggc agcagcggct acgagagcgt
gatgegggac agegaggeca ceggeagege gteeteggeg caggaeteca egagegagaa
cagcagetee gtgggeggea ggtgeeggag ceteaagaee eegaagaaae geteeaatee
aggttetcag agaeggagge ttateceage actatecetg gacacetett eccetgtgag
aaaaccccc aacagcacag gcgtccgctg ggtggatggn nccccttgcg gagcagcccg
aggggeettg gggaacettt gagattaaag tetnatgaaa tegatgaegt ggagegeetg
cagcggcgac gagggggtgc cagcaaggag gccatgtgct tcaatgcaaa gctgaagatt
ctqqaacacc qccaqcaqaq qatcqccqaq qtccqcgcga agtacgagtg gctgatgaag
gagetggagg egaceaaaca gtatetgatg etggateeca acaagtgget cagtgaattt
gacttggagc aggtttggga gctggattcc ctggagtacc tggaggcact ggagtgtgtg
acggagegee tggagageeg tgtcaactte tgcaaggeee ateteatgat gete
774
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<210> 4220

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<211> 258
<212> PRT
<213> Homo sapiens
<400> 4220
Xaa Gly Arg Ala Pro Ala Pro Val Ala Leu Gln Gln Asp His Ala Pro
Ala Glu Ala Pro Pro Leu Gln Gln Arg Pro Arg Gln Arg Gln Gln
                               25
Arg Ala Glu Arg Gly Ala Pro Ala Gly His Gly Glu Asp Gly Pro Val
                            40
Leu Pro Gln Arg Arg Gln Gln Arg Leu Arg Glu Arg Asp Ala Gly Gln
Arg Gly His Arg Gln Arg Val Leu Gly Ala Gly Leu His Glu Arg Glu
                                       75
                   70
Gln Gln Leu Arg Gly Arg Gln Val Pro Glu Pro Gln Asp Pro Glu Glu
                                    90
               85
Thr Leu Gln Ser Arg Phe Ser Glu Thr Glu Ala Tyr Pro Ser Thr Ile
                               105
Pro Gly His Leu Phe Pro Cys Glu Lys Thr Pro Gln Gln His Arg Arg
                           120
Pro Leu Gly Gly Trp Xaa Pro Leu Arg Ser Ser Pro Arg Gly Leu Gly
                                            140
                       135
Glu Pro Leu Arg Leu Lys Ser Xaa Glu Ile Asp Asp Val Glu Arg Leu
                                       155
                   150
Gln Arg Arg Gly Gly Ala Ser Lys Glu Ala Met Cys Phe Asn Ala
                                   170
                165
Lys Leu Lys Ile Leu Glu His Arg Gln Gln Arg Ile Ala Glu Val Arg
                               185
Ala Lys Tyr Glu Trp Leu Met Lys Glu Leu Glu Ala Thr Lys Gln Tyr
                           200
Leu Met Leu Asp Pro Asn Lys Trp Leu Ser Glu Phe Asp Leu Glu Gln
                       215
Val Trp Glu Leu Asp Ser Leu Glu Tyr Leu Glu Ala Leu Glu Cys Val
                                       235
                    230
Thr Glu Arg Leu Glu Ser Arg Val Asn Phe Cys Lys Ala His Leu Met
                                    250
                245
Met Leu
 <210> 4221
 <211> 789
 <212> DNA
 <213> Homo sapiens
 <400> 4221
 aatgtgaaga ggattaaaga ataaagaaaa aacaaaaaag tcttatacta aaataagaaa
 teagececat ettggeacag tteteatgea gaatattgea eccagtgtga actaacgeta
 gaagetteaa aetgtataaa tttaaatgta tttgeatatt ataaaaataa agataaacat
 atacatattt tacactagtt atggaacagc aatgaacgtc agtcgatccc tctttcacat
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240

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ttaacagaac tgaaatctga gtgctctaaa tactgccacc tgtactgtaa ctatggctta
300
tatgtgcacg gaaaacaaaa tccctgagaa gccattcgac ttttttttt tttctttct
tcaagtageg egeteettgg aggateaeag ttetgaggtt eaggttgtaa aacatttget
ccatgttctc gtccatgctt ccccccacca cccctcccc acctcttccc cagtcgtcca
aaaagcaccc tgcaagcacg cgttgtcact caagttcaca gaacacgctg gggtgagtgc
agagggtctg ccaggtgcaa aagatggtcc aggtgttcag atgctctctt ttctccatgg
aaattccaca gccacaaacg tcactggttt ctgtgctttt caccaacatt cttcccttaa
aaattggtgc tcctaaagtc acagtttggg tacagtaaaa atgatggcat aaggaaaaga
agcactatet tttccactta attttccaag aaagtatgaa gatacttgga acaggggetg
atcacaqtc
789
<210> 4222
<211> 127
<212> PRT
<213> Homo sapiens
<400> 4222
Met Ala Tyr Met Cys Thr Glu Asn Lys Ile Pro Glu Lys Pro Phe Asp
Phe Phe Phe Phe Ser Phe Leu Gln Val Ala Arg Ser Leu Glu Asp His
                                 25
Ser Ser Glu Val Gln Val Val Lys His Leu Leu His Val Leu Val His
                             40
Ala Ser Pro His His Pro Leu Pro Thr Ser Ser Pro Val Val Gln Lys
                                             60
                         55
Ala Pro Cys Lys His Ala Leu Ser Leu Lys Phe Thr Glu His Ala Gly
                                         75
                     70
Val Ser Ala Glu Gly Leu Pro Gly Ala Lys Asp Gly Pro Gly Val Gln
                                     90
Met Leu Ser Phe Leu His Gly Asn Ser Thr Ala Thr Asn Val Thr Gly
                                 105
 Phe Cys Ala Phe His Gln His Ser Ser Leu Lys Asn Trp Cys Ser
                                                 125
                             120
         115
·<210> 4223
 <211> 852
 <212> DNA
 <213> Homo sapiens
 <400> 4223
 atcctggacc agggctacta ctcggagcga gacacaagca acgtggtacg gcaagtcctg
 gaggeegtgg cctatttgca etcactcaag ategtgeaca ggaateteaa getggagaae
 120
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ctggtttact acaaccggct gaagaactcg aagattgtca tcagtgactt ccatctggct
aagctagaaa atggcctcat caaggageec tgtgggaeec eegaagattt tgeeeceeaa
ggggaaggcc ggcagcggta tggacgccct gtggactgct gggccattgg agtcatcatg
tacatcctgc tttcaggcaa tccacctttc tatgaggagg tggaagaaga tgattatgag
aaccatgata agaatctctt ccgcaagatc ctggctggtg actatgagtt tgactctcca
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caagaccage ggateactge agaagaggee ateteceatg agtggattte tggcaatget
gettetgata agaacateaa ggatggtgte tgtgeecaga ttgaaaagaa etttgeeagg
gccaagtgga agaaggctgt ccgagtgacc accctcatga aacggctccg ggcaccagag
cagtccagca cggctgcagc ccagtcggcc tcagccacag acactgccac ccccggggct
gcagaccgta gtgccacccc agccacagat ggaagtgcca ccccagccac tgatggcagt
gtcaccccag ccaccgatgg aagcatcact ccagccattg atgggagtgt caccccagcc
actgacagga gc
852
<210> 4224
<211> 284
<212> PRT
<213> Homo sapiens
Ile Leu Asp Gln Gly Tyr Tyr Ser Glu Arg Asp Thr Ser Asn Val Val
Arg Gln Val Leu Glu Ala Val Ala Tyr Leu His Ser Leu Lys Ile Val
His Arg Asn Leu Lys Leu Glu Asn Leu Val Tyr Tyr Asn Arg Leu Lys
Asn Ser Lys Ile Val Ile Ser Asp Phe His Leu Ala Lys Leu Glu Asn
Gly Leu Ile Lys Glu Pro Cys Gly Thr Pro Glu Asp Phe Ala Pro Gln
                    70
Gly Glu Gly Arg Gln Arg Tyr Gly Arg Pro Val Asp Cys Trp Ala Ile
                85
                                    90
Gly Val Ile Met Tyr Ile Leu Leu Ser Gly Asn Pro Pro Phe Tyr Glu
Glu Val Glu Glu Asp Asp Tyr Glu Asn His Asp Lys Asn Leu Phe Arg
                            120
Lys Ile Leu Ala Gly Asp Tyr Glu Phe Asp Ser Pro Tyr Trp Asp Asp
Ile Ser Gln Ala Ala Lys Asp Leu Val Thr Arg Leu Met Glu Val Glu
                                         155
                    150
Gln Asp Gln Arg Ile Thr Ala Glu Glu Ala Ile Ser His Glu Trp Ile
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165

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Ser Gly Asn Ala Ala Ser Asp Lys Asn Ile Lys Asp Gly Val Cys Ala
                               185
           180
Gln Ile Glu Lys Asn Phe Ala Arg Ala Lys Trp Lys Lys Ala Val Arg
                                                205
                            200
Val Thr Thr Leu Met Lys Arg Leu Arg Ala Pro Glu Gln Ser Ser Thr
                        215
                                            220
Ala Ala Ala Gln Ser Ala Ser Ala Thr Asp Thr Ala Thr Pro Gly Ala
                                        235
                    230
Ala Asp Arg Ser Ala Thr Pro Ala Thr Asp Gly Ser Ala Thr Pro Ala
                                    250
                245
Thr Asp Gly Ser Val Thr Pro Ala Thr Asp Gly Ser Ile Thr Pro Ala
                                265
           260
Ile Asp Gly Ser Val Thr Pro Ala Thr Asp Arg Ser
                            280
        275
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<212> DNA
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gacagggtcc tacagttaac tgcagtcgac gcagacgaag ggtcaaatgg ggagatcaca
tatgaaatcc ttgttggggc tcagggagac ttcatcatca ataaaacaac agggcttatc
accategete caggggtgga aatgatagte gggeggaett aegeaeteee ggtecaagea
geggataatg etecteetge aaageaaagg acteceatet geactgtgta tattgaagtg
cttccaccaa ataatcaaag ccctcctcgc ttcccacagc tgatgtatag ccttgaaatt
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<210> 4226
<211> 156
<212> PRT
<213> Homo sapiens
<400> 4226
Xaa Val Gln Glu Ser Glu Pro Val Ile Val Asn Ile Gln Val Met Asp
                                    10
Ala Asn Asp Asn Thr Pro Thr Phe Pro Glu Ile Ser Tyr Asp Val Tyr
                                25
Val Tyr Thr Asp Met Arg Pro Gly Asp Arg Val Leu Gln Leu Thr Ala
                            40
Val Asp Ala Asp Glu Gly Ser Asn Gly Glu Ile Thr Tyr Glu Ile Leu
                       . 55
Val Gly Ala Gln Gly Asp Phe Ile Ile Asn Lys Thr Thr Gly Leu Ile
```

170

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65
                   70
                                        75
Thr Ile Ala Pro Gly Val Glu Met Ile Val Gly Arg Thr Tyr Ala Leu
Pro Val Gln Ala Ala Asp Asn Ala Pro Pro Ala Lys Gln Arg Thr Pro
           100
Ile Cys Thr Val Tyr Ile Glu Val Leu Pro Pro Asn Asn Gln Ser Pro
                            120
       115
Pro Arg Phe Pro Gln Leu Met Tyr Ser Leu Glu Ile Ser Glu Ala Met
                        135
Arg Val Gly Ala Val Leu Leu Asn Leu Gln Ala Thr
                    150
<210> 4227
<211> 1199
<212> DNA
<213> Homo sapiens
<400> 4227
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attataaatt taacttctaa catgttttat ggttaaaatt gtactttttt cctttagcga
cattcaaatg catcacaatc actttgtgaa attgttcgcc tgagcagaga ccagatgtta
caaattcaga acagtacaga gcccgacccc ctgcttgcca ctctagaaaa gcaagaaatt
atagagcagc ttctatcaaa tattttccac aaggagaaaa atgagtcagc catagtcagt
gcaatccaga tattgctgac tttacttgag acacgacgac caacatttga aggccatata
gagatotgoc caccaggoat gagocattoa gottgttoag taaacaagag tgttotagaa
gccatcagag gaagacttgg atcttttcat gaactcctgc tggagccacc caagaaaagt
gtgatgaaga ccacatgggg tgtgctggat cctcctgtgg ggaatacccg gttgaatgtc
attaggttga tatccagect getteaaace aataccagea gtataaatgg ggacettatg
gagetgaata geattggagt catattgaae atgttettea agtatacatg gaataaettt
ttgcatacac aagtggaaat ttgtattgca ctgattcttg caagtccttt tgaaaacaca
gaaaatgcca caattaccga tcaagactcc actggtgata atttgttatt aaaacatctt
ttccaaaaat gtcaattaat agaacgaata cttgaagcct gggaaatgaa tgagaagaaa
caggctgagg gaggaagacg gcatggttac atgggacacc taacgaggat agctaactgt
atogtgcaca gcactgacaa gggccccaac agtgcattag tgcagcagct tatcaaaggt
960
aagttatttg tgaaatttga attacatttt tgttgggttg caggaaggat ttaagggtca
agtagaaatg catgtagcat ttttaatagt gatttgtggg acttctttat atttggcaaa
1080
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ttatgtattt gaatgaggtt cttgagaatg tgtttgaaca gggttgtttt ttgggttgta
ttttatgttc atgtagttac agaccattcc ataagcattg gcaggcttgg ctggattca
<210> 4228
<211> 298
<212> PRT
<213> Homo sapiens
<400> 4228
Arg His Ser Asn Ala Ser Gln Ser Leu Cys Glu Ile Val Arg Leu Ser
                                   10
Arg Asp Gln Met Leu Gln Ile Gln Asn Ser Thr Glu Pro Asp Pro Leu
                                25
Leu Ala Thr Leu Glu Lys Gln Glu Ile Ile Glu Gln Leu Leu Ser Asn
                           40
Ile Phe His Lys Glu Lys Asn Glu Ser Ala Ile Val Ser Ala Ile Gln
                                            60
                        55
Ile Leu Leu Thr Leu Leu Glu Thr Arg Arg Pro Thr Phe Glu Gly His
                  70
Ile Glu Ile Cys Pro Pro Gly Met Ser His Ser Ala Cys Ser Val Asn
                                    90
               85
Lys Ser Val Leu Glu Ala Ile Arg Gly Arg Leu Gly Ser Phe His Glu
                               105
                                                    110
           100
Leu Leu Clu Pro Pro Lys Lys Ser Val Met Lys Thr Thr Trp Gly
                                                125
                           120
Val Leu Asp Pro Pro Val Gly Asn Thr Arg Leu Asn Val Ile Arg Leu
                                           140
                       135
Ile Ser Ser Leu Leu Gln Thr Asn Thr Ser Ser Ile Asn Gly Asp Leu
                                       155
                    150
Met Glu Leu Asn Ser Ile Gly Val Ile Leu Asn Met Phe Phe Lys Tyr
                                   170
Thr Trp Asn Asn Phe Leu His Thr Gln Val Glu Ile Cys Ile Ala Leu
                               185
Ile Leu Ala Ser Pro Phe Glu Asn Thr Glu Asn Ala Thr Ile Thr Asp
                           200
Gln Asp Ser Thr Gly Asp Asn Leu Leu Leu Lys His Leu Phe Gln Lys
                        215
Cys Gln Leu Ile Glu Arg Ile Leu Glu Ala Trp Glu Met Asn Glu Lys
                                        235
                    230
Lys Gln Ala Glu Gly Gly Arg Arg His Gly Tyr Met Gly His Leu Thr
                                    250
Arg Ile Ala Asn Cys Ile Val His Ser Thr Asp Lys Gly Pro Asn Ser
                                265
Ala Leu Val Gln Gln Leu Ile Lys Gly Lys Leu Phe Val Lys Phe Glu
Leu His Phe Cys Trp Val Ala Gly Arg Ile
 <210> 4229
 <211> 1612
 <212> DNA
 <213> Homo sapiens
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120				gcccagacac	
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T 011	Lys	<b>A</b>	7 ~~		C1.	Co~	Dho	C111		T10	700	ui.c	T 011		
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	Glu 530		_			535	_		-		540				
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	Leu			565					570					575	
•	Val	-	580			•		585		-			590		
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	Ala			645					650					655	
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=	Leu	_	•	725					730					735	
	Glu		740					745					750		
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785 Leu	Gln	Gly	Phe	Gln	790 Ala	Arg	Pro	Glu	Leu	795 Leu	Glu	Val	Phe	Ser	800 Thr
Glu	Phe	Gln	Met	805 Arg	Leu	Leu	Trp	Gly	810 Ser	Gln	Gly	Ala	Ser	815 Ser	Ser
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 Gln Ser Lys Thr Gln Ser Asp Gly Ser Thr Leu Gln Gln Gly Ser Leu
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 Glu Phe Phe Ser Cys Leu Tyr Glu Ile Gln Glu Glu Glu Phe Ile Gln
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 Gln Ala Leu Ser His Phe Gln Val Ile Val Val Ser Asn Ile Ala Ser
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 Lys Met Glu His Met Val Ser Ser Phe Cys Leu Lys Arg Cys Arg Ser
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001	O <sub>1</sub>	0111		. 405		Deu	Cys	116			GIY	Arg	ser		GIU
Dro	V-1	Clv				7	17-1	3	410			-		415	
PIO	. vai	GIY	420	Arg	PIO	Arg	vai			met	Ser	Ser			Glu
7.50	7 00	T1		mb	T	m\		425		_		_	430		
ASP	ASP	435	ASP	inr	Leu	inr			Asp	ser	Asp		Asn	Val	Ile
7 ~~~	æb.∞			The area	7	m	440			_		445	_	_	
Arg	450	ьys	GIII	ıyı	Leu		vaı	АТА	Asp	Leu		Arg	Lys	Asp	Lys
7 ~~		7	N	<b>7</b>	T	455	~1 ·-	-7.	_	_,	460	_			_
465		nen	Arg	Lys		TYE	GIN	TTE	Tyr		Trp	Asn	Ile	Ala	Thr
		17-1	Dha	T	470	T	D	**- 7		475	_				480
116	AIA	Val	PHE		Ala	ьeu	Pro	vaı			Leu	Val	Ile		Tyr
Gln	The	Wa 1	Unit	485	77a 7	mb	<b>61</b>		490			_	_	495	
GIII	1111	val	50Ò	ASII	Val	inr	GIY		GIn	Asp	11e	Cys		Tyr	Asn
Dha	Lou	Cvc		u: a	Dwa	T 0	G1	505					510	_	
Fire	Leu	515	AId	nis	Pro	Leu		ASN	reu	Ser	Ala		Asn	Asn	Ile
Lau	Sar.		T 011	C1	TT	т1.	520	<b>.</b>	<b>01</b>	• .	_	525	_	_	
Бец	530	ASII	Leu	GIY	Tyr		Leu	Leu	GIA	Leu		Phe	Leu	Leu	Ile
ר ז ב		Cln	7 ~~	· @1	т1 "	535	*** -	<b>.</b>			540	_		_	
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Deu	Cys	ΑIG	neu	565	Cys	GIY	ire	PIO	570	nis	Pne	GIY	Leu		Tyr
Ala	Met	Glv	Thr		Leu	Mo+	Mat	C1.,		7 011	T 011	C	×1 -	575	m
		<b>4-</b> ]	580			••••	1100	585	Gly	Deu	Deu	361	590	cys	ıyr
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Tyr	Met		Ala	Glv	Leu	Cvs		Leu	Lvs	Leu	Tvr		Larg	Ara	Wic
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Asp Ala Thr Gly Gly Pro Gly Arg Pro Ala Ala Pro Ala Ser Arg Pro
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Glu Glu Leu Ala Ser Ala Arg Arg Ala Ala Val Leu Gly Arg Arg Ala
Gly Pro Glu Leu Leu Pro Gln Gln Gly Gly Gly Arg Gly Glu Met
 Gln Val Glu Ala Gly Gly Thr Ser Pro Ala Gly Glu Arg Arg Gly Arg
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 Gly Ile Pro Ala Pro Ala Lys Leu Gly Gly Ala Arg Arg Ser Arg Arg
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 Ala Gln Pro Pro Ile Thr Gln Glu Arg Gly Asp Ala Trp Ala Thr Ala
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Ara	Leu	Pro	Ser	Thr	Ser	Phe	Ala	Leu	Thr	Gly	Asp	Ser	Ala	His	Asn
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Gln	Ala	Met	Val	His	Trp	Ser	Gly	His	Asn	Ser	Ser	Val	Ile	Leu	Ile
-		275			-		280					285			
Leu	Thr	Lys	Leu	Tyr	Asp	Phe	Asn	Leu	Gly	Ser	Val	Thr	Glu	Ser	Ser
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Leu	Trp	Arg	Ser	Thr	Asp	Tyr	Gly	Thr	Thr	Tyr	Glu	Lys	Leu	Asn	Asp
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Lys	Val	Gly	Leu	Lys	Thr	Val	Leu	Ser	Tyr	Leu	Tyr	Val	Asn	Pro	Thr
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Ile	Leu	Ile	Ser	Ser	Asp	Glu	Gly	Ala	Thr	Tyr	Gln	Lys	Tyr	Arg	Leu
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Thr	Phe	Tyr	Ile	Gln	Ser	Leu	Leu	Phe	His	Pro		Gln	Glu	Asp	Trp
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Val	Leu	Ala	Tyr	Ser		Asp	Gln	Lys	Leu		Ser	Ser	Met	Asp	
385	•			_	390				_	395		_	_	_	400
Gly	Arg	Arg	Trp		Leu	Met	His	Glu		Ile	Thr	Pro	Asn	Arg	Pne
_	_	_		405	~1	<b>-</b>		•	410		3	T	**- 3	415	N
Tyr	Trp	Ser		АТА	GIĀ	Leu	Asp		GIU	Ala	Asp	ьеп	430	His	Met
<b>61</b>	**- 7	<b>3</b>	420	m\	7	c1	TT	425	uio	T1~	T 011	Thr		λνα	Ť16
GII	vaı		Thr	Inr	Asp	GIY	1yr	ALA	HIS	Tyr	Leu	445	Cys	Arg	TIE
<b>03</b> -	G1	435	- ו ת	C1.,	The	Thr		Car	Gly	Dro	Dhe		Ara	Ser	Tle
GIII	450	cys	ALG	GIU	1111	455	A19	JCI.	OL y	110	460	n_u	9		
λen		Ser	Ser	T.e.11	Val		Gln	Asp	Glu	Tvr		Phe	Ĭle	Gln	Val
465	116	JUL	361	DCu	470	•	0111			475					480
	Thr	Ser	Glv	Ara		Ser	Tvr	Tvr	Val		Tvr	Arq	Arq	Glu	
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Phe	Ala	Gln	Ile	Lys	Leu	Pro	Lys	Tyr	Ser	Leu	Pro	Lys	Asp	Met	His
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		~1	Thr	Δla	Pro	Glv	Leu	Val	Val	Ala	Thr	Gly	Asn	ile	GLY

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Glv	Asn	Thr	Trp	Ara	Gln	Ile	Phe	Asp	Glu	Glu	Tyr	Asn	Val	Trp	Phe
1		675					680	•			-	685			
T 011	λen.		Gly	Glv	Δla	Leu		Δla	Met	Lvs	His	Thr	Pro	Leu	Pro
Беа	690	110	Ory	Q1,	7124	695				-,-	700				
1		***	*	T	17-1	Ser	Dho	N.c.	C1.,	G117		Sar	Trans.	Men	Lve
	Arg	HIS	Leu	irp		ser	PILE	ASD	GIU		UIS	261	пр	rsp	720
705				_	710	_	_	_,	3	715	<b>01</b>	21-	<b>.</b>	**- 1	
Tyr	Gly	Phe	Thr		Val	Pro	ren	Pne		Asp	GIY	Ата	Leu		GIU
				725					730		_			735	_
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Arq	His	Cys	Thr	Lys	Glu	Asp	Tyr	Gln	Thr	Trp	His	Leu	Leu	Asn	Gln
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Glv	Glu	Pro	Cvs	Val	Met	Gly	Glu	Arq	Lys	Ile	Phe	Lys	Lys	Arg	Lys
785			-1-		790			-	•	795		•	•	_	800
	Glv	בומ	Gla	Cve		Leu	Glv	Ara	Asp		Ser	Glv	Ser	Val	
	Gry	via	GIII	805	7114	200	<b>U</b>		810			1		815	
Q	<b>~1</b>	D	C++0		Cuc	Ala	n on	Trn		Dha	Glu	Cve	Acn		Glv
ser	GIU	PIO	_	vai	Cys	AIA	ASII		ASP	FIIC	GIU	Cys	830	1 7 1	Gry
_		_	820	~ 1	~1	<b>.</b>	<b>0</b> 3 - :	825	77- 1		n1_	nh -		m	700
Tyr	GIu	_	HIS	GIA	GIU	Ser		Cys	vaı	Pro	Ата		ILD	TÀT	ASII
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Pro	Ala	Ser	Pro	Ser	Lys	Asp	.Cys	Ser	Leu	Gly		Ser	Tyr	Leu	Asn
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Ser	Thr	Gly	Tyr	Arg	Arg	Ile	Val	Ser	Asn	Asn	Cys	Thr	Asp	Gly	Leu
865					870					875					880
Arg	Glu	Lys	Tyr	Thr	Ala	Lys	Ala	Gln	Met	Cys	Pro	Gly	Lys	Ala	Pro
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Ara	Thr		Tle	Gln	Leu	Asp	Phe	Glv	Asp	Glv	Ile	Ala	Val	Ser	Tyr
*****	930					935		1		2	940				•
ת 1 ת			Sar	Dro	τÌΑ	Glu	Δen	Glv	Tle	Lvs		Val	Tvr	Lvs	Ser
945	ASII	FILE	261	FIO	950	GIU	nop	Gry	110	955		• • • • • • • • • • • • • • • • • • • •	-1-	-1-	960
	<b>~</b> 1	71.	Dha	<b>Cl</b> =		Thr	71-	The part	ח 1 ח		Nen	λen.	Leu	Gly	
Ala	GIĀ	iie	Pne		vai	IIIL	MIG	IAT		Giu	ASII	ASII	шец	975	561
_	_,			965	_,				970	<b>2</b>	B	17-1	<b>01</b>		17-1
Asp	Thr	Ala		Leu	Pne	Leu	HIS		vai	Cys	Pro	vaı		HIS	Val
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		Thr	Phe	Leu			Glv	Thr	Asp	Thr	Ile	Thr	Val	Gln	Val
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Δla	Δla	Glv	Acn			Tle	Gln	Asn			Glu	Ile	Ala		His
MIG	nia	GTÅ	106		∵u	444	2211	106		-y-3			107		
~? -·	m	nk-			C1~	T ~··	T		-	C~~	D~-	7			ጥረታው
GLU	ıyr	rue	GIU	ser	GIII	Leu	neu	Ser	File	Set	510	ASII	neu	woh	Tyr

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His Asn Pro Asp Ile Pro Glu Trp Arg Lys Asp Ile Gly Asn Val Ile
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Lys Arg Ala Leu Val Lys Val Thr Ser Val Pro Glu Asp Gln Ile Leu
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                                      1115
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Pro Pro Lys Asn Leu Thr Glu Arg Arg Lys Gly Asn Glu Gly Asp Leu
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                              1145
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Leu Thr Leu Ala Pro Leu Val Asp Ser Ser Ala Gly His Ser Ser Ser
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Leu Ile Tyr Lys Phe Lys Arg Lys Ile Pro Trp Ile Asn Ile Tyr Ala
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Arg Asn Ala Ser Gly Ile Asn Pro Arg Val Pro Gly Pro Gln Glu Gly
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Ser Ile Ile Gly Pro Gln Thr Arg Arg Lys Ser Ser Leu Leu Lys Pro
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Thr Leu Ile Ser Glu Pro Ala Asp Met Gly Thr Gln Gln Phe Leu Gln
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                                    90
Leu Asn Pro Asn Leu Gln Lys Phe Ser Arg Asp Met Glu Asp Val Lys
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                                105
Gly Thr Pro Ser Lys Pro Leu Glu Asn Tyr Asn Met Leu Ala Gly Leu
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cggccccttc ccactcacca cccccacccc aggtgctggg ggtcccttat ttttatgcaa
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Lys Cys His Trp Lys Glu Lys Gln Asp Tyr Ala Phe Ala Cys Glu Gln
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75

90

Met Lys Ser Ile Arg Gln Asp Leu Thr Val Gln Gly Ile Arg Thr Glu

65

70

85

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Gly Asp His Glu Glu Phe Asn Gln Cys Gln Thr Gln Leu Lys Ser Leu
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Ile Leu Tyr Tyr Ile Phe Thr Lys Asn Ser Gly Asp Ile Thr Thr Glu
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Leu Ala Tyr Leu Thr Arg Glu Leu Lys Ala Asp Pro Cys Val Ala His
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                                   170
Ala Leu Ala Leu Arg Thr Ala Trp Ala Leu Gly Asn Tyr His Arg Phe
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Phe Arg Leu Tyr Cys His Ala Pro Cys Met Ser Gly Tyr Leu Val Asp
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                           200
Lys Phe Ala Asp Arg Glu Arg Lys Val Ala Leu Lys Ala Met Ile Lys
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                                           220
Thr Tyr Val Val Pro Ser Ser Leu Leu Pro Leu Leu Phe Pro Ser Phe
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Arg Leu Ala Pro Pro Leu Arg Pro Ala Pro Gly Arg Arg Pro Pro Pro
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                                   250
Ala Pro Asn Pro Cys Pro Gly Pro Cys Phe Pro Ile Ile Phe Leu His
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Cys Val Pro Gly His Ser Ser Pro Ser Pro His Cys Ser Gln Leu Thr
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Val Pro Val Arg Phe His Leu His Pro Glu Gly Leu Leu Trp Cys Ser
Arg Cys Phe Phe Ser His Gly Pro Lys Gly Ser Glu Pro Pro Gly Arg
Ser Ala Gly Leu Gln Gly Ala Thr Glu Arg Ser Gly Arg Pro Ser Val
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 Gly Val Leu Arg Ile Tyr Ser Gly Ser Leu Met Gly Gln Ala Leu Asp
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 Pro Thr Arg Lys Gln Trp Tyr Leu His Ala Val Ala Asn Pro Gly Leu
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 Ile Ser Leu Thr Gly Pro Tyr Leu Asp Val Gly Gly Ala Gly Tyr Val
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 Val Thr Ile Ser His Thr Ile His Ser Ser Ser Thr Gln Leu Ser Ser
. Gly His Thr Val Ala Val Met Gly Ile Asp Phe Thr Leu Arg Tyr Phe
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 Tyr Lys Val Leu Met Asp Leu Leu Pro Val Cys Asn Gln Asp Gly Gly
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 Asn Lys Ile Arg Cys Phe Ile Met Glu Asp Arg Gly Tyr Leu Val Ala
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 His Pro Thr Leu Ile Asp Pro Lys Gly His Ala Pro Val Glu Gln Gln
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155

145

150

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His Ile Thr His Lys Glu Pro Leu Val Ala Asn Asp Ile Leu Asn His
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Pro Asn Phe Val Lys Lys Asn Leu Cys Asn Ser Phe Ser Asp Arg Thr
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                                                  190
Val Gln Arg Phe Tyr Lys Phe Asn Thr Ser Leu Ala Gly Asp Leu Thr
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Asn Leu Val His Gly Ser His Cys Ser Lys Tyr Arg Leu Ala Arg Ile
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Pro Gly Thr Asn Ala Phe Val Gly Ile Val Asn Glu Thr Cys Asp Ser
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Leu Ala Phe Cys Ala Cys Ser Met Val Asp Arg Leu Cys Leu Asn Cys
                                  250
His Arg Met Glu Gln Asn Glu Cys Glu Cys Pro Cys Glu Cys Pro Leu
                              265
Glu Val Asn Glu Cys Thr Gly Asn Leu Thr Asn Ala Glu Asn Arg Asn
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Pro Ser Cys Glu Val His Gln Glu Pro Val Thr Tyr Thr Ala Ile Asp
                       295 °
                                       . 300
Pro Gly Leu Gln Asp Ala Leu His Gln Cys Val Asn Ser Arg Cys Ser
                  310
                                      315
Gln Arg Leu Glu Ser Gly Asp Cys Phe Gly Val Leu Asp Cys Glu Trp
            325
                                  330
Cys Met Val Asp Ser Asp Gly Lys Thr His Leu Asp Lys Pro Tyr Cys
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Ala Pro Gln Lys Glu Cys Phe Gly Gly Ile Val Gly Ala Lys Ser Pro
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Tyr Val Asp Asp Met Gly Ala Ile Gly Asp Glu Val Ile Thr Leu Lys
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660

720

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 Asp Gln Ser Pro Gly Lys His Met Val Thr Met Asp Gly Val Arg Glu
 Glu Asp Leu Ala Pro Phe Ser Leu Arg Lys Arg Trp Glu Ser Glu Pro
 His Pro Tyr Val Phe Phe Asn Asp Asp His Thr Thr Met Thr Phe Ile
 Gly Phe His Leu Gln Pro Asn Ile Asn Gly Ser Val Asp Ala Ile Ser
                                         75
                     70
 His Leu Thr Gly Lys Val Ile Lys Arg Asp Val Met Thr Arg Asp Leu
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                                     90
 Tyr Gln Gly Leu Leu Gln Arg Val Pro Phe Asn Val Asp Phe Asp
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 Lys Leu Pro Arg His Lys Lys Leu Glu Arg Leu Cys Leu Thr Leu Gly
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 Ile Pro Gln Ala Thr Asp Pro Asp Lys Thr Tyr Glu Leu Thr Thr Asp
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 Asn Met Leu Lys Ile Leu Ala Ile Glu Met Arg Phe Arg Cys Gly Ile
                                         155
 Pro Val Ile Ile Met Gly Glu Thr Gly Cys Gly Lys Thr Arg Leu Ile
                                     170
 Lys Phe Leu Ser Asp Leu Arg Arg Gly Gly Thr Asn Ala Asp Thr Ile
             180
                                 185
 Lys Leu Val Lys Val His Gly Gly Thr Thr Ala Asp Met Ile Tyr Ser
                             200
 Arg Val Arg Glu Ala Glu Asn Val Ala Phe Ala Asn Lys Asp Gln His
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                                             220
Gln Leu Asp Thr Ile Leu Phe Phe Asp Glu Ala Asn Thr Thr Glu Ala
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Ile Ser Cys Ile Lys Glu Val Leu Cys Asp His Met Val Asp Gly Gln
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                                                         255
Pro Leu Ala Glu Asp Ser Gly Leu His Ile Ile Ala Ala Cys Asn Pro
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Tyr Pro Glu Asn Ser Glu Glu Met Ile Cys Arg Leu Glu Ser Ala Gly
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Leu Gly Tyr Arg Val Ser Met Glu Glu Thr Ala Asp Arg Leu Gly Ser
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Glu Gln Lys Cys Val Lys Cys Lys Glu Ala Gln Pro Val Val Val Ile
Arg Ala Gly Asp Ala Phe Cys Arg Asp Cys Phe Lys Ala Phe Tyr Val
                        55
His Lys Phe Arg Ala Met Leu Gly Lys Asn Arg Leu Ile Phe Pro Gly
                                        75
                    70 .
Glu Lys Val Leu Leu Ala Trp Ser Gly Gly Pro Ser Ser Ser Met
                                    90
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Val Trp Gln Val Leu Glu Gly Leu Ser Gln Asp Ser Ala Lys Arg Leu
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Arg Phe Val Ala Gly Val Ile Phe Val Asp Glu Gly Ala
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<213> Homo sapiens
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His Met Phe Lys Asp Lys Gly Val Trp Gly Asn Lys Gln Asp His Arg
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25

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Asn Tyr Leu Arg His Gly Gln Leu Ile Val Asn Asp Gly Ile Asn Leu
Leu Gly Val Leu Glu Glu Ala Arg Phe Phe Gly Ile Asp Ser Leu Ile
Glu His Leu Glu Val Ala Ile Lys Asn Ser Gln Pro Pro Glu Asp His
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Ser Pro Ile Ser Arg Lys Glu Phe Val Arg Phe Leu Leu Ala Thr Pro
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                                105
Thr Lys Ser Glu Leu Arg Cys Gln Gly Leu Asn Phe Ser Gly Ala Asp
       115
                            120
Leu Ser Arg Leu Asp Leu Arg Tyr Ile Asn Phe Lys Met Ala Asn Leu
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Ser Arg Cys Asn Leu Ala His Ala Asn Leu Cys Cys
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His Val Tyr Val Pro His Val Ile Cys Asn Gly Gln Val Leu Pro Glu
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Ser Ser Gly Ile Asp Met Ile Asp Ser Ser Pro Ser Val Asn Gly Arg
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Val Ile Val Lys Ser Ala Thr Gly Glu Ile Tyr Leu Phe Cys Lys Gly
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Ala Asp Ser Ser Ile Phe Pro Arg Val Ile Glu Gly Lys Val Asp Gln
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Cys Val Ala Tyr Lys Arg Leu Ile Gln Glu Glu Tyr Glu Gly Ile Cys
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Lys			Thr	Ala	Ala	Ala		Cys	Tyr	Ala	Cys		Leu	Pne	Arg
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Arg		Thr	Gln	Leu	Leu		Leu	Thr	Tnr	гÃг		TIE	GIU	GIU	GIII
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	Leu	His	Asp	Val		Pne	GIU	Leu	ser	395	1111	Val	Leu	ALG	400
385			Leu	ml	390	7.00	2 00	T 011	ca=		Lou	Sar	Δla	Asn	
Ser	GIA	ser	Leu		Arg	ASP	ASII	Leu	410	GIY	пеп	Jer	ALU	415	
a1 -	2	T	Gly	405	T10	τΊο	Λen	Glv		Δla	T.e.u	Ser	Leu		Met
GIII	ASD	IYI	420	Den		116	Азр	425	7.14	****	Dou		430		
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Lys	FIU	435	GIU	лэр	<u></u>	001	440	,		- 2	5	445	•		
Glu	Tle		Arg	Ser	Cvs	Ser		Val	Leu	Cys	Cys	Arg	Met	Ala	Pro
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Leu			Ala	Gln	Ile	Val	Lys	Leu	Ile	Lys	Phe	Ser	Lys	Glu	His
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	Ile	Thr	Leu	Ala	Ile	Gly	Asp	Gly	Ala	Asn	Asp	Val	Ser	Met	Ile
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Leu	Glu	Ala	His	Val	Gly	Ile	Gly	Val	Ile	Gly	Lys	Glu	.Gly	Arg	Gln
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Pne	Leu	IYI	GIII	565		Cys	Gry	File	570		0111			575	F
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	690		r ph-		. T	695		. C1	, (21	. 1757	700		Pro	) Dhe	Leu
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Lys Thr Phe Val Gln Arg Asn Met Phe Glu Phe Lys His Ile Lys Ala
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Thr Pro Gly Met Leu His Ala Gly Gln Ser Leu Gln Ile Phe Arg Lys
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Trp Ala Gly Asn Glu Lys Asn Met Val Ile Met Pro Gly Tyr Cys Val
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Gln Gly Thr Val Gly His Lys Ile Leu Ser Gly Gln Arg Lys Leu Glu
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435

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His Leu His Asp Thr Arg Lys Glu Gln Glu Thr Ala Leu Arg Val Tyr
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Ser His Leu Lys Ser Val Leu Lys Asp His Cys Val Gln His Leu Pro
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Ser Glu Asp Pro Gly Thr Lys Val Leu Leu Val Ser Trp Thr Tyr Gln
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Lys Arg Cys Glu Ser Cys Ser Gln Lys Leu Glu Arg Glu Asn Asn His
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Cys Asn Ile Ser His Ser Ile Ile Leu Asn Ser Glu Asp Gly Glu Ile
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Leu Asn Asn Glu Glu His Glu Tyr Ala Ser Lys Lys Arg Lys Lys Asp
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Ser Gln Leu Thr Ser Leu Ser Gly Val Ala Gln Lys Asn Tyr Phe Asn
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ccaaacacac cqtatttcat ctqtagcatt caagacttca aactggtcca caactcccag
720
gcctgttgca gatctccaac tcctgctttg tgtgaccccc cagcatgctc tctgccggtg
gcatcacage caccacagca tetttetgaa geegggagag ggeetgtagg gagtaagagg
gaccatctcc tcatgaacgt caaatggtac taccgtcaat ctgaggttcc agattctgtg
tatcagcatt tggttcagga tcgacataat gaaaatgact ctggaagaga acttgtcatt
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<400> 4278
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Arg Asp Arg Asp Arg Glu Arg Glu Lys Arg Asp Lys Ala Arg Glu Ser
Glu Asn Ser Arg Pro Arg Arg Ser Cys Thr Leu Glu Gly Gly Ala Lys
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Asn Tyr Ala Glu Ser Asp His Ser Glu Asp Glu Asp Asn Asp Asn Asn
                        55
Ser Ala Thr Ala Glu Glu Ser Thr Lys Lys Asn Lys Lys Pro Pro
                   70
                                        75
Lys Lys Ser Arg Tyr Glu Arg Thr Asp Thr Gly Glu Ile Thr Ser
               85
                                   90
Tyr Ile Thr Glu Asp Asp Val Val Tyr Arg Pro Gly Asp Cys Val Tyr
                                105
Ile Glu Ser Arg Arg Pro Asn Thr Pro Tyr Phe Ile Cys Ser Ile Gln
                           120
                                               125
Asp Phe Lys Leu Val His Asn Ser Gln Ala Cys Cys Arg Ser Pro Thr
Pro Ala Leu Cys Asp Pro Pro Ala Cys Ser Leu Pro Val Ala Ser Gln

→ 150.

                                        155
Pro Pro Gln His Leu Ser Glu Ala Gly Arg Gly Pro Val Gly Ser Lys
                                   170
Arg Asp His Leu Leu Met Asn Val Lys Trp Tyr Tyr Arg Gln Ser Glu
                                                    190
           180
                                185
Val Pro Asp Ser Val Tyr Gln His Leu Val Gln Asp Arg His Asn Glu
        195
                            200
Asn Asp Ser Gly Arg Glu Leu Val Ile Thr Asp Pro Val Ile Lys Asn
Arg Glu Leu Phe Ile Ser Asp Tyr Val Asp Thr Tyr His Ala Ala Ala
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                                        235
Leu Arg Gly Lys Cys Asn Ile Leu His Phe Ser Asp Ile
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caggcagcag ctgcctccct gcccaccagt gaggaggacc tctgccccat ctgctatgcc
caccccatct ctgctgtgtt ccagccctgt ggccacaagt cctgcaaagc ctgtatcaac
cagcacctga tgaacaacaa ggactgcttc ttctgcaaaa ccaccatcgt gtctqtaqaq
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ccctttgccc ttctcctgta tcccacacca ccacatccaa cctccttgcc tqcctqtatc
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<213> Homo sapiens
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            20
                                25
Val Ser Asp Asp Val Asn Glu Tyr Ala Met Ala Leu Arg Asp Thr Glu
                            40
Asp Lys Leu Arg Arg Cys Pro Lys Arg Arg Lys Asp Ile Leu Ala Glu
                        55
Leu Thr Lys Ser Gln Lys Val Phe Ser Glu Lys Leu Asp His Leu Ser
                    70
                                        75
Arg Arg Leu Ala Trp Val His Ala Thr Val Tyr Ser Gln Glu Lys Met
                85
                                    90
Leu Asp Ile Tyr Trp Leu Leu Arg Val Cys Leu Arg Thr Ile Glu His
                                105
                                                    110
Gly Asp Arg Thr Gly Ser Leu Phe Ala Phe Met Pro Glu Phe Tyr Leu
                            120
Ser Val Ala Ile Asn Ser Tyr Ser Ala Leu Lys Asn Tyr Phe Gly Pro
                        135
                                            140
Val His Ser Met Glu Glu Leu Pro Gly Tyr Glu Glu Thr Leu Thr Arg
                    150
                                        155
Leu Ala Ala Ile Leu Ala Lys His Phe Ala Asp Ala Arg Ile Val Gly
                165
                                    170
Thr Asp Ile Arg Asp Ser Leu Met Gln Ala Leu Ala Ser Tyr Val Cys
            180
                                185
Tyr Pro His Ser Leu Arg Ala Val Glu Arg Ile Pro Glu Glu Gln Arg
                            200
Ile Ala Met Val Arg Asn Leu Leu Ala Pro Tyr Glu Gln Arg Pro Trp
                                            220
Ala Gln Thr Asn Trp Ile Leu Val Arg Leu Trp Arg Gly Cys Gly Phe
                                        235
Gly Tyr Arg Tyr Thr Arg Leu Pro His Leu Leu Lys Thr Lys Leu Glu
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245
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Asp Ala Asn Leu Pro Ser Leu Gln Lys Pro Cys Pro Ser Thr Leu Leu
                             265
                                       270
Gln Gln His Met Ala Asp Leu Leu Gln Gln Gly Pro Asp Val Ala Pro
                          280
Ser Phe Leu Asn Ser Val Leu Asn Gln Leu Asn Trp Ala Phe Ser Glu
                       295
Phe Ile Gly Met Ile Gln Glu Ile Gln Gln Ala Ala Glu Arg Leu Glu
                                      315
                  310
Arg Asn Phe Val Asp Ser Arg Gln Leu Lys Val Cys Ala Thr Cys Phe
                                  330
               325
Asp Leu Ser Val Ser Leu Leu Arg Val Leu Glu Met Thr Ile Thr Leu
                              345
           340
Val Pro Glu Ile Phe Leu Asp Trp Thr Arg Pro Thr Ser Glu Met Leu
                          360
Leu Arg Arg Leu Ala Gln Leu Leu Asn Gln Val Leu Asn Arg Val Thr
                      375
                                          380
Ala Glu Arg Asn Leu Phe Asp Arg Val Val Thr Leu Arg Leu Pro Gly
                                     395
                  390
Leu Glu Ser Val Asp His Tyr Pro Ile Leu Val Ala Val Thr Gly Ile
                                 410
Leu Val Gln Leu Leu Val Arg Gly Pro Ala Ser Glu Arg Glu Gln Ala
                             425
           420
Thr Ser Val Leu Leu Ala Asp Pro Cys Phe Gln Leu Arg Ser Ile Cys
                          440
Tyr Leu Leu Gly Gln Pro Glu Pro Pro Ala Pro Gly Thr Ala Leu Pro
                                          460
                      455
Ala Pro Asp Arg Lys Arg Phe Ser Leu Gln Ser Tyr Ala Asp Tyr Ile
                                      475
                  470
Ser Ala Asp Glu Leu Ala Gln Val Glu Gln Met Leu Ala His Leu Thr
              485
                                 490
Ser Ala Ser Ala Gln Ala Ala Ala Ser Leu Pro Thr Ser Glu Glu
                   505
Asp Leu Cys Pro Ile Cys Tyr Ala His Pro Ile Ser Ala Val Phe Gln
                          520
Pro Cys Gly His Lys Ser Cys Lys Ala Cys Ile Asn Gln His Leu Met
                       535
Asn Asn Lys Asp Cys Phe Phe Cys Lys Thr Thr Ile Val Ser Val Glu
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                550
Asp Trp Glu Lys Gly Ala Asn Thr Ser Thr Thr Ser Ser Ala Ala
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<210> 4281
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<211> 507

<212> DNA

<213> Homo sapiens

<400> 4281

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getgaetetg agaggeagtg ggetteeege cageacetee ecetateaca tttgtaggge

WO 00/58473

PCT/US00/08621

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tggtttatga ggccggaagt aagcaagcac cccctcatat caacctggca cttcacaccc
cccatggtta tcagtggggg tgctggctgg ctggcaggca gccagagaca tttcagcagg
tcaggcatgg atgcaggtgg aaatgagaga ggatcagtga gcgcattcat gtcttttgag
tggtctacag atgagtggtc tccagtctca aatgaggaga acaaataggg aagtaggagc
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acacccattc ccaagggcac aggatcc
507
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<212> PRT
<213> Homo sapiens
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                                     10
Asp Leu Leu Lys Cys Leu Trp Leu Pro Ala Ser Gln Pro Ala Pro Pro
            20
Leu Ile Thr Met Gly Gly Val Lys Cys Gln Val Asp Met Arg Gly Cys
Leu Leu Thr Ser Gly Leu Ile Asn Gln Pro Tyr Lys Cys Asp Arg Gly
                        55
Arg Cys Trp Arg Glu Ala His Cys Leu Ser Glu Ser Ala Gln Arg Thr
                                        75
Glu Ser Gly Asp Ser Trp Gln Lys Arg Gly Gly Leu Arg Leu Trp Gly
Ile Trp Pro Ile Gly Gln Leu Trp Gly Ser
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<211> 315
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<213> Homo sapiens
<400> 4283
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gggagaaacc gagtccccgc cgggtcccca ccgtgtggcg ccgaccgaaa taactccagt
ccagctgcaa aaaccctccc gaaaacccaa gcttgtccgg cacaacttcg gtctctccag
ceteatteet geoegeacte egecaaactg etegecetge ceagegeage ggatgeageg
300
ctcccggccc nacgg
315
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<210> 4284

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<211> 91
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<213> Homo sapiens
<400> 4284
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Ser Asn Gly Gln Gly Arg Gly Ala Gly Gly Pro Gly Glu Thr Glu Ser
                                 25
 Pro Pro Gly Pro His Arg Val Ala Pro Thr Glu Ile Thr Pro Val Gln
                             40
Leu Gln Lys Pro Ser Arg Lys Pro Lys Leu Val Arg His Asn Phe Gly
                                             60
                         55
Leu Ser Ser Leu Ile Pro Ala Arg Thr Pro Pro Asn Cys Ser Pro Cys
                    70
 Pro Ala Gln Arg Met Gln Arg Ser Arg Pro Xaa
                 85
 <210> 4285
 <211> 591
 <212> DNA
 <213> Homo sapiens
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 aaaatcctga ccaagatgaa gcagcagggt catgagacag ccgcctgtcc ggagactgaa
 gagataccgc agggagccag tggctgctgg aaggatgacc tccagaagga actgagtgat
 atatggtgat geccageetg cagtetgace ectgaceete etetgaacee gtteeceeaa
 egggatetgg cagtgaceae cagaacetgg ageceaeetg agtecagaet teceteaeee
 cctaggacte accecaceae ggececeaae ettagetgta etgetgteta caccetgage
 agtgtggagt ctcccagcgc ccccagctcc ttgtcttctt gcaggtctgc tgtgcacgtg
 ctgcaggact ccatagacag cctcactttg tgctcggggg cctgtcccaa ggcctcgagc
 ctaagaggcc acaagggcac cagtgcctga gccctccact cccctcctgg gactctgact
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 <210> 4286
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                                     10
 Gln Arg Asp Leu Ala Val Thr Thr Arg Thr Trp Ser Pro Pro Glu Ser
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20
                                25
Arg Leu Pro Ser Pro Pro Arg Thr His Pro Thr Thr Ala Pro Asn Leu
                            40
Ser Cys Thr Ala Val Tyr Thr Leu Ser Ser Val Glu Ser Pro Ser Ala
Pro Ser Ser Leu Ser Ser Cys Arg Ser Ala Val His Val Leu Gln Asp
                    70
                                        75
Ser Ile Asp Ser Leu Thr Leu Cys Ser Gly Ala Cys Pro Lys Ala Ser
                85
Ser Leu Arg Gly His Lys Gly Thr Ser Ala
            100
                                105
<210> 4287
<211> 868
<212> DNA
<213> Homo sapiens
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cggaaagcta cagtgttgaa gacatggatg agggtagcga cqaagtcgqq qaqqaagaqa
tggttgaagg caacgactat gaagaattcg gtgcgtttgg tggctatggc accctcacca
getttgacat ccatatecte agageetteg gaagettggg tecaggeett egeatettat
300
cgaatgagcc ctgggaactg gaaaaccnct gtgctggccc agaccctggt ggaggcattg
360
cagetggate eggaaacaet tgecaatgag aeggeegeee gtgetgeeaa egtageeege
geogeogect ccaaccgtgc ggctcgggcc gctgccgccg ctgcccgtac cgccttcagt
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acctcccaga tgttagtcac cagtaagatg gctgcccccg aggctccggc aacctccgca
cagtcccaga caggctcccc ggcccaggag gctgctactg agggccctag tagcgcctgt
720
gcattetete aggeteegtg tgecagggag gtggaegeea aeeggeeeag cacageette
780
ctgggccaga atgatgtctt cgatttcact cagccggcag tgtcagtggc atggcttccc
gegeccaaga gacetgeeca gecaagag
868
<210> 4288
<211> 240
<212> PRT
<213> Homo sapiens
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<400> 4288

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Thr Met Lys Asn Ser Val Arg Leu Val Ala Met Ala Pro Ser Pro Ala
                               25
Leu Thr Ser Ile Ser Ser Glu Pro Ser Glu Ala Trp Val Gln Ala Phe
                           40
Ala Ser Tyr Arg Met Ser Pro Gly Asn Trp Lys Thr Xaa Val Leu Ala
                                           60
Gln Thr Leu Val Glu Ala Leu Gln Leu Asp Pro Glu Thr Leu Ala Asn
                                       75
                   70
Glu Thr Ala Ala Arg Ala Ala Asn Val Ala Arg Ala Ala Ala Ser Asn
                                   90
               85
Arg Ala Ala Arg Ala Ala Ala Ala Ala Arg Thr Ala Phe Ser Gln
                               105
            100
Val Val Ala Ser His Arg Val Ala Thr Pro Gln Val Ser Gly Glu Asp
                            120
Thr Gln Pro Thr Thr Tyr Ala Ala Glu Ala Gln Gly Pro Thr Pro Glu
                                            140
                        135
Pro Pro Leu Ala Ser Pro Gln Thr Ser Gln Met Leu Val Thr Ser Lys
                                       155
                    150
Met Ala Ala Pro Glu Ala Pro Ala Thr Ser Ala Gln Ser Gln Thr Gly
                                    170
               165
Ser Pro Ala Gln Glu Ala Ala Thr Glu Gly Pro Ser Ser Ala Cys Ala
                               185
Phe Ser Gln Ala Pro Cys Ala Arg Glu Val Asp Ala Asn Arg Pro Ser
                           200
Thr Ala Phe Leu Gly Gln Asn Asp Val Phe Asp Phe Thr Gln Pro Ala
                                           220
                       215
Val Ser Val Ala Trp Leu Pro Ala Pro Lys Arg Pro Ala Gln Pro Arg
                                       235
<210> 4289
<211> 353
 <212> DNA
<213> Homo sapiens
<400> 4289
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 caaagageet tttgggaaca gttttettat tgaaacatae teagtgttta aacetgeagg
 tgtgggttgg tggcagtcca catggcatcc tttgctctgt ccctgttctc ctgtctctgg
 ctattcaggt tcccgtgagg atactgtcac ccttgaataa tggagcttgc ggaagaccaa
 geceetgitt tiggagiest tgigetgagg eegetgiaae tigeggagag tig
 353
 <210> 4290
 <211> 113
 <212> PRT
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<213> Homo sapiens

<400> 4290

## Met Thr Thr Leu Pro Val Arg Asp Met Arg Glu Lys Tyr Gly Ser Leu 10 Leu Thr Ser Gly Val Thr Ala Gln His Ile Ser Arg Leu Cys Phe His 25 Ile Gly Leu Ala Lys Ser Leu Leu Gly Thr Val Phe Leu Leu Lys His 40 Thr Gln Cys Leu Asn Leu Gln Val Trp Val Gly Gly Ser Pro His Gly 55 Ile Leu Cys Ser Val Pro Val Leu Leu Ser Leu Ala Ile Gln Val Pro 70 Val Arg Ile Leu Ser Pro Leu Asn Asn Gly Ala Cys Gly Arg Pro Ser 85 90 Pro Cys Phe Trp Ser Pro Cys Ala Glu Ala Ala Val Thr Cys Gly Glu 100 105 Leu <210> 4291 <211> 517 <212> DNA <213> Homo sapiens <400> 4291 nnaaatttgc caagccaaga gttaccccag gaagattctc tcttacatgg ccaattttca caagcagtca ctcccctagc ccatcatcac acagattatt caaagcccac cgatatctca tggagagaca cactttctca gaagtttgga tcctcagatc acttggagaa actatttaag atggatgaag caagtgccca gctccttgct tataaggaaa aaggccattc tcagagttca caatttteet etgateaaga aatageteat etgetgeetg aaaatgtgag tgegeteeea gctacggtgg cagttgcttc tccacatacc acctcggcta ctccaaagcc cgccaccctt ctacccacca atgcttcagt gacaccttct gggacttccc agccacagct ggccaccaca getecacetg taaccactgt caetteteag ceteceacga eceteattte tacagttttt 480 acacgggctg tggctacact ccaagcaatg gctacaa 517 <210> 4292 <211> 172 <212> PRT <213> Homo sapiens <400> 4292 Xaa Asn Leu Pro Ser Gln Glu Leu Pro Gln Glu Asp Ser Leu Leu His Gly Gln Phe Ser Gln Ala Val Thr Pro Leu Ala His His His Thr Asp

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Tyr Ser Lys Pro Thr Asp Ile Ser Trp Arg Asp Thr Leu Ser Gln Lys
                                                45
Phe Gly Ser Ser Asp His Leu Glu Lys Leu Phe Lys Met Asp Glu Ala
                        55
Ser Ala Gln Leu Leu Ala Tyr Lys Glu Lys Gly His Ser Gln Ser Ser
                                        75
                    70
Gln Phe Ser Ser Asp Gln Glu Ile Ala His Leu Leu Pro Glu Asn Val
                                    90
Ser Ala Leu Pro Ala Thr Val Ala Val Ala Ser Pro His Thr Thr Ser
                                105
            100
Ala Thr Pro Lys Pro Ala Thr Leu Leu Pro Thr Asn Ala Ser Val Thr
                            120
        115
Pro Ser Gly Thr Ser Gln Pro Gln Leu Ala Thr Thr Ala Pro Pro Val
                        135
Thr Thr Val Thr Ser Gln Pro Pro Thr Thr Leu Ile Ser Thr Val Phe
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                    150
Thr Arg Ala Val Ala Thr Leu Gln Ala Met Ala Thr
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<210> 4293
<211> 547
<212> DNA
<213> Homo sapiens
<400> 4293
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tacgetttta cagtteactg tgtaaagaga geacgaegge accgetggaa gtgggegeag
gtgactttct ggtgtccaga ggagcagctg tgtcacttgt ggctgcagac cctgcgggag
atgetggaga agetgaegte cagaccaaag catttactgg tatttatcaa ecegtttgga
ggaaaaggac aaggcaagcg gatatatgaa agaaaagtgg caccactgtt caccttagcc
tecateacea etgacateat egttaetgaa eatgetaate aggecaagga gaetetgtat
gagattaaca tagacaaata cgacggcatc gtctgtgtcg gcggagatgg tatgttcagc
gaggtgctgc acggtctgat tgggaggacg cagaggagcg ccggggtcga ccagaaccac
540
ccccggg
547
<210> 4294
 <211> 182
 <212> PRT
 <213> Homo sapiens
 <400> 4294
Ala Gly Ala Pro Gly Ala Asp Ala Cys Ser Val Pro Val Ser Glu Ile
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 Lys Trp Gln Lys Met Glu Lys Pro Tyr Ala Phe Thr Val His Cys Val
 Lys Arg Ala Arg Arg His Arg Trp Lys Trp Ala Gln Val Thr Phe Trp
                                             60
 Cys Pro Glu Glu Gln Leu Cys His Leu Trp Leu Gln Thr Leu Arg Glu
 65
                                         75
Met Leu Glu Lys Leu Thr Ser Arg Pro Lys His Leu Leu Val Phe Ile
                                     90
Asn Pro Phe Gly Gly Lys Gly Gln Gly Lys Arg Ile Tyr Glu Arg Lys
                                 105
                                                     110
Val Ala Pro Leu Phe Thr Leu Ala Ser Ile Thr Thr Asp Ile Ile Val
                             120
Thr Glu His Ala Asn Gln Ala Lys Glu Thr Leu Tyr Glu Ile Asn Ile
                         135
Asp Lys Tyr Asp Gly Ile Val Cys Val Gly Gly Asp Gly Met Phe Ser
                    150
                                         155
Glu Val Leu His Gly Leu Ile Gly Arg Thr Gln Arg Ser Ala Gly Val
                165
                                     170
                                                         175
Asp Gln Asn His Pro Arg
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<210> 4295
<211> 431
<212> DNA
<213> Homo sapiens
<400> 4295
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catgtacatt ttgtgtatgg ctgcttttgt gccacaacag cagggttgag tattgcgaca
180
gagaccccca ttgcccacaa gcctaaaaca tttgccatcg agccctttaa gaaagagttt
240
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gcaggcggtg aggtctggag ttcgaaacca gcctggccag cgtggcgaaa ccctgtctcc
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cgtgccaacc a
431
<210> 4296
<211> 138
<212> PRT
<213> Homo sapiens
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10

1

5

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Val Thr Asn Lys Ser Pro Leu Leu Ala Pro Cys Phe Val Asn Lys Ile
                              25
Cys Trp Thr Thr Ala Met Pro Val His Val His Phe Val Tyr Gly Cys
Phe Cys Ala Thr Thr Ala Gly Leu Ser Ile Ala Thr Glu Thr Pro Ile
                       55
Ala His Lys Pro Lys Thr Phe Ala Ile Glu Pro Phe Lys Lys Glu Phe
                   70
                                      75
Ala Gly Arg Ala Arg Trp Pro Trp Leu Pro Pro Val Ile Pro Ala Leu
                                  90
Trp Lys Ala Glu Ala Gly Gly Glu Val Trp Ser Ser Lys Pro Ala Trp
                              105
Pro Ala Trp Arg Asn Pro Val Ser Pro Ser Gln Ile His Val Ile Ile
                           120
Pro Pro Gln Pro Pro Glu Tyr Leu Gly Leu
                       135
   130
<210> 4297
<211> 1668
<212> DNA
<213> Homo sapiens
<400> 4297
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gatttcaccg tgattccatc taaactgatt cagtttgacc caggaatgtc aactaagatg
tggaatatag caattaccta tgacggatta gaggaagatg atgaggtctt tgaagtaatt
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Asp Ser Lys Gly Gly Gln Cys His Pro Ser Tyr Ser Ser Asn Gln Ser
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Lys His Ser Thr Trp Glu Lys Gly Ile Trp His Leu Leu Pro Pro Gly
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Ser Ser Ser Ser Thr Thr Ser Gly Ser Phe His Leu Glu Arg Arg Pro
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Gly Phe Asp Ser Thr Asp Leu Ser Gln Arg Lys Leu Arg Thr Arg Gly
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Trp Ser Pro Gln Thr Lys Asp Val Glu Asp Lys Ser Cys Pro Ala Gly
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Trp His Gln His Ser Gly Tyr Cys His Ile Leu Ile Thr Glu Gln Lys
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Gly Thr Trp Asn Ala Ala Ala Gln Ala Cys Arg Glu Gln Tyr Leu Gly
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 Ser Glu Cys Ser Pro Ser Ser Leu Arg Ser His Pro Pro Ala Leu Gly
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Ser Pro Asp Tyr Glu Phe Asn Val Trp Thr Arg Pro Asp Cys Ala Glu
Thr Glu Phe Glu Asn Gly Asn Arg Ser Trp Phe Tyr Phe Ser Val Arg
Gly Gly Met Pro Gly Lys Leu Ile Lys Ile Asn Ile Met Asn Met Asn
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Tyr Ser Asp Cys Gln Glu Leu Leu Asn Gln Leu Asp Gln Arg Phe Pro
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Glu Asn His Pro Thr His Ser Ser Pro Leu Asp Thr Ile Tyr Tyr His
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Arg Glu Leu Leu Cys Tyr Ser Leu Asp Gly Leu Arg Val Asp Leu Leu
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Val	Leu	His	Pro	Ala	Ile	Tyr	Gly	Ala	Lys	Ala	Val	Leu	Leu	Tyr	His
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His	Val	His	Ser	Arg	Leu	Asn	Ser	Gln	Ser	Ser	Ser	Glu	His	Gln	Pro
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Ser	Val	Trp	Ile	Met	Pro	Gln	Gln	Ser	Ala	Gly	Leu	Glu	Glu	Ser	Ala
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Phe	Ser	Asp	Glu	Ser	Thr	Gln	Val	Glu	Asn	Met	Leu	Tyr	Pro	Lys	Leu
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Pro	Ala	Ala	Cys	His	Asp		Gly	Arg	Ala	Ser		Pro	Pro	Pro	Pro
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Ala	Met	Ala	Ile		Ala	Leu	Asp	Met			Cys	Asn	Pro		Pro
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Arg	Ile	Val			Glu	His	Ser			Thr	Asn	Leu			Trp
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Met	Leu			Val	Arg	Asn			Gly	Leu	Ser			Leu	Asn
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Asn	Gly	Leu	Pro	Val	Ser		Ser	Glu	Asn			ser	Arg	Ala	Arg
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Ser	Phe	Ser	Thr		Thr	Ser	Ala	Gly			Ser	Ser	Ser		
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					Lys	_	_	_					•••		

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660

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Δsn	Δτα	Dhe	Δla		T.e.11	Dro	Dro	Δla		Δl =	Glu	Len	Clv	His	Bic
non	AL 9	FIIC	100	nr 9	Dea	FLO	FIU	105	vaı	AIG	GIU	pen	110	UIS	птэ
T.A.I	Thr	Glu		N c n	Wal.	502	ui.		7~~	T 011	Th∽	71-		Gly	71-
Deu	1111	115	пец	rab	vai	261	120	MSII	Arg	ьеu	1111		Leu	Grà	Ald
C1	V-1		C ~ ~	21.	T 011	7 ~~		T 0	7	T	*	125	T	G	•••
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N	130	*	D		<b>.</b>		<b>31</b> -	<b>01</b> -	•	<b>a</b> 1 .	140	•			_
	GIN	Leu	PIO	АТА		Pro	Ala	GIN	Leu	_	Ala	Leu	Ala	His	
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T	m\	77-	180	<b>D</b>		<b>01.</b>	•	185	<b>~</b> 3 .	-	,		190	_,	_,
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Cys 385 His His	370 Met Ser Lys Val Ser	355 Lys Lys Gln Ala Glu 435	Ile Gly Pro Ala 420 Gly	Lys Ile Ala 405 Gly Cys	Asp Pro 390 Val Lys Pro	Asn 375 Tyr Gln Thr Gly Ser	360 Pro Ile Pro Leu Gly 440	345 Phe Leu Ala Arg Leu 425 Gly	Gly Ile Ala Leu 410 Arg	Gln Gln Tyr 395 Lys His	Pro 380 Gln Leu Cys Glu Val	365 Pro Lys Leu Leu Lys 445	Arg Tyr Glu Leu Thr 430 Cys	Glu Leu Met 415 Glu	Val Ala 400 Gly Glu Pro
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-	850		-	-	Val	855					860				-
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Ile Ala Gly Leu Ser Gln Gly Pro Ser Leu Gly Ser Thr Gly Ser Ser
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Val Gly Gly Ser Glu Val Arg Cys Cys His Phe Val Trp Phe Asn Met
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gagactggag gggaaggcga caggcggatt gcgctctctc gagccaactc atcctctttc
360
agttctgggg aaagctgctc tttcgaatcg tcactcagct ctcactgcac aaatgcaggt
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gtctccgtct tg
<210> 4312
<211> 144
<212> PRT
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<213> Homo sapiens <400> 4312 Xaa Arg Val Lys Gly Ile Arg Pro Trp Asn Cys Gln Arg Cys Phe Ala His Tyr Asp Val Gln Ser Ile Leu Phe Asn Ile Asn Glu Ala Met Ala 20 25 Thr Arg Ala Asn Val Gly Lys Arg Lys Asn Ile Thr Thr Gly Ala Ser Ala Ala Ser Gln Thr Gln Met Pro Thr Gly Gln Thr Gly Asn Cys Glu Ser Pro Leu Gly Ser Lys Glu Asp Leu Asn Ser Lys Glu Asn Leu Asp Ala Asp Glu Gly Asp Gly Lys Ser Asn Asp Leu Val Leu Ser Cys Pro 90 85 Tyr Phe Arg Asn Glu Thr Gly Gly Glu Gly Asp Arg Arg Ile Ala Leu 105 Ser Arg Ala Asn Ser Ser Ser Phe Ser Ser Gly Glu Ser Cys Ser Phe 120 125 Glu Ser Ser Leu Ser Ser His Cys Thr Asn Ala Gly Val Ser Val Leu <210> 4313 <211> 936 <212> DNA <213> Homo sapiens <400> 4313 ggatecetee ttttteetee eetgeeetge eeaggeeeag atggeettga etgtaaagee aggtgetgee tgacaggtte tteteteect gtetetggte attgatecat etetttgtee attragtate caaccatect etecattete etetggacet caccactete agagetgett gteetggeag aatetaeagt teaceceaac tetatgeett acceeteeca acceaacage atttgcagtt tgcaaaatat acagacccaa gtcctgaggg gactgaggac atgatgctgg 300 geccaagtet cetgeteagg gettetetee aatgecagee etgecaetee tteeteacee 360 teettggage eteetetget gettgtetat eecaaeggee etgeteeeet eeetteetge cetteaceag etttetggga caccatgece tgaggaaggg acetttggtt ttetetaaae atctttgaag ggctgaggca gtcagggctg gctgccttgt cactctttat ttggaagcca ctcaaaccat teccaagaag agggacetea getggcaate tggaaacetg geccaggtet gggcagatgt cttcacttct cctaccttcc cagtcttgtg atcctgtgat gagcaccagg 660

atggccctgt ggtccctaga gcacccctca tgctgtaggg tcctgcagcc ccatcctttc

totactgggc cetggtatec tggeteetet etcagetetg ceaetgatet etgtgeetta

780

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gtttacttct ctgcacgggg gactcacccc aagaccattt ccagcagctt cccaggtgat
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 gtggtgcccc aaggctgggc tttgcagctg tggcccagct ccttagtgct gcccaggaga
 caccaggetg ctcagaatga ggtgactgcg ggcaac
936
<210> 4314
 <211> 110
 <212> PRT
<213> Homo sapiens
<400> 4314
Met Ser Ser Leu Leu Pro Ser Gln Ser Cys Asp Pro Val Met Ser
                                     10
Thr Arg Met Ala Leu Trp Ser Leu Glu His Pro Ser Cys Cys Arg Val
            20
                                 25
                                                     30
Leu Gln Pro His Pro Phe Ser Thr Gly Pro Trp Tyr Pro Gly Ser Ser
                             40
Leu Ser Ser Ala Thr Asp Leu Cys Ala Leu Val Tyr Phe Ser Ala Arg
                         55
                                             60
Gly Thr His Pro Lys Thr Ile Ser Ser Phe Pro Gly Asp Val Val
                    70
                                        75
Pro Gln Gly Trp Ala Leu Gln Leu Trp Pro Ser Ser Leu Val Leu Pro
                85
                                    90
Arg Arg His Gln Ala Ala Gln Asn Glu Val Thr Ala Gly Asn
            100
                                105
                                                     110
<210> 4315
<211> 573
<212> DNA
<213> Homo sapiens
<400> 4315
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cagagegatg accatgtgaa gacacaggga agagatggcc acctaccacc acgccatggt
cacctaccat ccaagccatg gtcaccttca ccaagccaca gtcatctacc atccaagcca
ccgtcaccta ccatccaage catggccacc tacctgccaa gccatggcca cctacccgcc
aagccatggt cacctaccca ccaagtcatg gtcgcctacc atccaaggag caggcctgga
acagateett eeccagagee etcagtagga gecaaceetg etgacacett gatetcagae
ttcaagcctc cagaactgtg ggacaatcct tcactgtcat ttaatccacc cagcatgtgg
tctcttgtca cagttgcatt agccagtgaa cctacccggg cccttctgca gtcgcctggc
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agacccgagg gagatatttg ggaaacaaga tgg
573
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<210> 4316

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<211> 169
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<213> Homo sapiens
<400> 4316
Xaa Leu Ile Gln Tyr Asp Trp Cys Pro Tyr Lys Lys Arg Lys Leu Gly
                                    10
His Arg Gln Ala Gln Ser Asp Asp His Val Lys Thr Gln Gly Arg Asp
                               25
Gly His Leu Pro Pro Arg His Gly His Leu Pro Ser Lys Pro Trp Ser
                            40
Pro Ser Pro Ser His Ser His Leu Pro Ser Lys Pro Pro Ser Pro Thr
                        55
Ile Gln Ala Met Ala Thr Tyr Leu Pro Ser His Gly His Leu Pro Ala
                    70
                                        75
Lys Pro Trp Ser Pro Thr His Gln Val Met Val Ala Tyr His Pro Arg
Ser Arg Pro Gly Thr Asp Pro Ser Pro Glu Pro Ser Val Gly Ala Asn
                               105
           100
Pro Ala Asp Thr Leu Ile Ser Asp Phe Lys Pro Pro Glu Leu Trp Asp
                           120
                                                125
Asn Pro Ser Leu Ser Phe Asn Pro Pro Ser Met Trp Ser Leu Val Thr
                       135
                                           140
Val Ala Leu Ala Ser Glu Pro Thr Arg Ala Leu Leu Gln Ser Pro Gly
                                        155
                   150
Ser Gly Val Val Leu Val Arg Lys Phe
                165
<210> 4317
<211> 744
<212> DNA
<213> Homo sapiens
<400> 4317
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teccatgeeg aaaacataet eeagatattt aatgaattte gtgatageeg ettatteaca
gatgttatca tttgggtgga aggaaaagaa tttccttgcc atagagctgt gctctcagcc
tqtaqcaqct acttcaqaqc tatqttttqt aatgaccaca gggaaagccg agaaatgttg
qttqagatca atggtatttt agctgaaqct atggaatgtt ttttqcagta tgtttatact
ggaaaggtga agatcactac agagaatgta cagtatetet ttgagacate aageetettt
360
cağattagtg ttctccgtga tgcatgtgcc aagttcttgg aggagcaact tgatccttgt
aattgcttag gaatccagcg ctttgctgat acccattcac tcaaaacact cttcacaaaa
tgcaaaaatt ttgcgttaca gacttttgag gatgtatccc agcacgaaga atttcttgag
540
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cttgacaaag atgaacttat tgattatatt tgtagtgatg aacttgttat tggtaaagag
 gagatggttt ttgaagccgt catgcgttgg gtctatcgtg ccgttgatct gagaagacca
 ctgttacacg agetectgac acatgtgaga etecetetgt tgcateccaa etaetttgtt
 caaacagttg aagtggacca attg
 744
 <210> 4318
 <211> 239
 <212> PRT
 <213> Homo sapiens
 <400> 4318
 Pro Val Arg Asp Leu Gly Ser Ile Ser Gly Ser Ser His Ala Glu Asn
                                     10
 Ile Leu Gln Ile Phe Asn Glu Phe Arg Asp Ser Arg Leu Phe Thr Asp
             20
                                 25
Val Ile Ile Trp Val Glu Gly Lys Glu Phe Pro Cys His Arg Ala Val
                             40
Leu Ser Ala Cys Ser Ser Tyr Phe Arg Ala Met Phe Cys Asn Asp His
                         55
Arg Glu Ser Arg Glu Met Leu Val Glu Ile Asn Gly Ile Leu Ala Glu
                    70
                                        75
Ala Met Glu Cys Phe Leu Gln Tyr Val Tyr Thr Gly Lys Val Lys Ile
                85
                                     90
Thr Thr Glu Asn Val Gln Tyr Leu Phe Glu Thr Ser Ser Leu Phe Gln
            100
                                105
Ile Ser Val Leu Arg Asp Ala Cys Ala Lys Phe Leu Glu Glu Gln Leu
                            120
Asp Pro Cys Asn Cys Leu Gly Ile Gln Arg Phe Ala Asp Thr His Ser
                        135
Leu Lys Thr Leu Phe Thr Lys Cys Lys Asn Phe Ala Leu Gln Thr Phe
                    150
                                        155
Glu Asp Val Ser Gln His Glu Glu Phe Leu Glu Leu Asp Lys Asp Glu
                165
                                    170
Leu Ile Asp Tyr Ile Cys Ser Asp Glu Leu Val Ile Gly Lys Glu Glu
                                185
                                                    190
Met Val Phe Glu Ala Val Met Arg Trp Val Tyr Arg Ala Val Asp Leu
                            200
Arg Arg Pro Leu Leu His Glu Leu Leu Thr His Val Arg Leu Pro Leu
                        215
Leu His Pro Asn Tyr Phe Val Gln Thr Val Glu Val Asp Gln Leu
                    230
<210> 4319
<211> 388
<212> DNA
<213> Homo sapiens
<400> 4319
nccatggaga aaagtattga tgctgtgatt gcaactgcct ctgcaccacc ttcttccagt
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ccaggccgta gccacagcaa ggaccgaacc ctgggaaaac cagacagcct tttagtgcct
120
gcagtcgcaa gtgactcttg caataatagc atctcactcc tatctgaaaa gttgacaagc
180
agctgttccc cccatcatat caagagaagt gtagtggaag ctatgcaacg ccaagctcgg
240
aaaatgtgca attacgacaa aatcttggcc acaaagaaaa acctagacca tgtcaataaa
atcttaaaaq ccaaaaaact tcaaaggcag gccaggacag ggaataactt tgtgaaacgt
aggccaggtc gaccgcggtc ggagagag
388
<210> 4320
<211> 129
<212> PRT
<213> Homo sapiens
<400> 4320
Xaa Met Glu Lys Ser Ile Asp Ala Val Ile Ala Thr Ala Ser Ala Pro
                                    10
Pro Ser Ser Pro Gly Arg Ser His Ser Lys Asp Arg Thr Leu Gly
            20
                                25
Lys Pro Asp Ser Leu Leu Val Pro Ala Val Ala Ser Asp Ser Cys Asn
                                                45
        35
                            40
Asn Ser Ile Ser Leu Leu Ser Glu Lys Leu Thr Ser Ser Cys Ser Pro
                        55
                                            60
His His Ile Lys Arg Ser Val Val Glu Ala Met Gln Arg Gln Ala Arg
                    70
                                        75
Lys Met Cys Asn Tyr Asp Lys Ile Leu Ala Thr Lys Lys Asn Leu Asp
                                    90
                85
His Val Asn Lys Ile Leu Lys Ala Lys Lys Leu Gln Arg Gln Ala Arg
                                105
Thr Gly Asn Asn Phe Val Lys Arg Pro Gly Arg Pro Arg Ser Glu
                            120
Arg
<210> 4321
<211> 278
<212> DNA
<213> Homo sapiens
<400> 4321
ngcccagaac ctgccacagt cccctgagaa caccgacctg caggttattc caggcagcca
60
gaccaggete ettggtgaga agaccaccac ageggeaggg tecagecaca geaggeeegg
120
egteceggtg gaaggeagee etgggeggaa ceeaggegtt taaeggetea etaggeagee
ccagatctgg ggaacagatg agcacgtggg gagctggagt gagctgagca gaagttttgt
geoegeetge ecceatecee tecaggeeae gttttaga
278
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<210> 4322

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<211> 85
<212> PRT
<213> Homo sapiens
<400> 4322
Met Gly Ala Gly Gly His Lys Thr Ser Ala Gln Leu Thr Pro Ala Pro
His Val Leu Ile Cys Ser Pro Asp Leu Gly Leu Pro Ser Glu Pro Leu
Asn Ala Trp Val Pro Pro Arg Ala Ala Phe His Arg Asp Ala Gly Pro
Ala Val Ala Gly Pro Cys Arg Cys Gly Gly Leu Leu Thr Lys Glu Pro
Gly Leu Ala Ala Trp Asn Asn Leu Gln Val Gly Val Leu Arg Gly Leu
                                        75
Trp Gln Val Leu Glv
                85
<210> 4323
<211> 1542
<212> DNA
<213> Homo sapiens
<400> 4323
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ctgaaagact cgacattcag ccagtttagc ccgatctcca gtgctgaaga gtttgatgac
gacgagaaga ttgaggtgga tgaccccct gacaaggagg acatgcgatc aagcttcagg
tegaatgtgt tgaeggggte ggeteeceag caggactacg ataagetgaa ggeactegga
ggggaaaact ccagcaaaac tggactctct acgtcaggca atgtggagaa aaacaaagct
gttaagagag aaacagaagc cagttctata aacctgagtg tttatgaacc ttttaaaqtc
agaaaagcag aggataaatt gaaggaaagc totgacaagg tgotggaaaa cagagtoota
gatgggaagc tgagctccga gaagaatgac accagcctcc ccagcgttgc gccatcaaag
480
acaaagtegt cetecaaget etegteetge ategetgeea tegeggetet cagegetaaa
aaggcggctt cagactcctg caaagaacca gtggccaatt cgagggaatc ctccccgtta
ccaaaagaag taaatgacag tccgagagcc gctgacaagt ctcctgaatc ccagaatctc
atcgacggga ccaaaaaacc atccctgaag caaccggata gtcccaqaaq catctcaaqt
720
gagaacagca gcaaaggatc cccgtcctct cccgcggggt ccacaccagc aatccccaaa
gtccgcataa aaaccattaa gacatcttct ggggaaatca agagaacagt gaccagggta
840
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ttgccagaag tggatcttga ctctggaaag aaaccttccg agcagacagc gtccgtcatg

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900
geotetgtga catecettet gtegteteca geateageeg cegteettte eteteceee
agggegeete tecagtetge ggtegtgace aatgeagttt eccetgeaga geteaceeee
1020
aaacaqqtca caatcaaqcc tqtqqctact qctttcctcc cagtgtctgc tgtgaagacg
1080
gcaggatccc aagtcattaa tttgaagctc gctaacaaca ccacggtgaa agccacggtc
1140
atatotgotg cototgtoca gagtgocago agogocatoa ttaaagotgo caacgocato
cagcagcaaa ctgtcgtggt gccggcatcc agcctggcca atgccaaact cgtgccaaag
actgtgcacc ttgccaacct taaccttttg cetcagggtg cecaggecac ctctgaacte
cgccaagtgc taaccaaacc tcagcaacaa ataaagcagg caataatcaa tgcagcagcc
tegeaaccc ccaaaaaggt gtetegagte caggtggtgt egteettgca gagttetgtg
gtggaagett teaacaaggt getgageagt gteaateeag teeetgttta cateecaaac
ctcagtcctc ccgccaatgc agggatcacg ttaccgacgc gt
1542
<210> 4324
<211> 514
<212> PRT
<213> Homo sapiens
<400> 4324
Xaa Tyr Ser Lys Asp Gly Ala Lys Ser Leu Lys Gly Asp Val Pro Ala
                                    10
Ser Glu Val Thr Leu Lys Asp Ser Thr Phe Ser Gln Phe Ser Pro Ile
            20
                                25
Ser Ser Ala Glu Glu Phe Asp Asp Glu Lys Ile Glu Val Asp Asp
                            40
Pro Pro Asp Lys Glu Asp Met Arg Ser Ser Phe Arg Ser Asn Val Leu
                        55
                                            60
Thr Gly Ser Ala Pro Gln Gln Asp Tyr Asp Lys Leu Lys Ala Leu Gly
                                        75
Gly Glu Asn Ser Ser Lys Thr Gly Leu Ser Thr Ser Gly Asn Val Glu
                85
                                    90
Lys Asn Lys Ala Val Lys Arg Glu Thr Glu Ala Ser Ser Ile Asn Leu
            100
                                105
                                                    110
Ser Val Tyr Glu Pro Phe Lys Val Arg Lys Ala Glu Asp Lys Leu Lys
        115
                            120
                                                125
Glu Ser Ser Asp Lys Val Leu Glu Asn Arg Val Leu Asp Gly Lys Leu
Ser Ser Glu Lys Asn Asp Thr Ser Leu Pro Ser Val Ala Pro Ser Lys
145
                    150
                                        155
Thr Lys Ser Ser Ser Lys Leu Ser Ser Cys Ile Ala Ala Ile Ala Ala
                165
                                    170
Leu Ser Ala Lys Lys Ala Ala Ser Asp Ser Cys Lys Glu Pro Val Ala
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185

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190
 Asn Ser Arg Glu Ser Ser Pro Leu Pro Lys Glu Val Asn Asp Ser Pro
        195
                200
                                             205
 Arg Ala Ala Asp Lys Ser Pro Glu Ser Gln Asn Leu Ile Asp Gly Thr
                       215
                                         220
 Lys Lys Pro Ser Leu Lys Gln Pro Asp Ser Pro Arg Ser Ile Ser Ser
                   230
                             235
 Glu Asn Ser Ser Lys Gly Ser Pro Ser Ser Pro Ala Gly Ser Thr Pro
               245
                        250
Ala Ile Pro Lys Val Arg Ile Lys Thr Ile Lys Thr Ser Ser Gly Glu
     260
                             265
 Ile Lys Arg Thr Val Thr Arg Val Leu Pro Glu Val Asp Leu Asp Ser
       275
                          280
Gly Lys Lys Pro Ser Glu Gln Thr Ala Ser Val Met Ala Ser Val Thr
                      295
                                          300
Ser Leu Leu Ser Ser Pro Ala Ser Ala Ala Val Leu Ser Ser Pro Pro
                  310
                                      315
Arg Ala Pro Leu Gln Ser Ala Val Val Thr Asn Ala Val Ser Pro Ala
                                  330
Glu Leu Thr Pro Lys Gln Val Thr Ile Lys Pro Val Ala Thr Ala Phe
                               345
Leu Pro Val Ser Ala Val Lys Thr Ala Gly Ser Gln Val Ile Asn Leu
                           360
                                              365
Lys Leu Ala Asn Asn Thr Thr Val Lys Ala Thr Val Ile Ser Ala Ala
                       375
                                          380
Ser Val Gln Ser Ala Ser Ser Ala Ile Ile Lys Ala Ala Asn Ala Ile
                  390
                                      395
Gln Gln Gln Thr Val Val Pro Ala Ser Ser Leu Ala Asn Ala Lys
               405
                                  410
Leu Val Pro Lys Thr Val His Leu Ala Asn Leu Asn Leu Leu Pro Gln
           420
                              425
Gly Ala Gln Ala Thr Ser Glu Leu Arg Gln Val Leu Thr Lys Pro Gln
                          440
Gln Gln Ile Lys Gln Ala Ile Ile Asn Ala Ala Ala Ser Gln Pro Pro
                      455
                                         460
Lys Lys Val Ser Arg Val Gln Val Val Ser Ser Leu Gln Ser Ser Val
                  470
                                     475
Val Glu Ala Phe Asn Lys Val Leu Ser Ser Val Asn Pro Val Pro Val
              485
                           490
Tyr Ile Pro Asn Leu Ser Pro Pro Ala Asn Ala Gly Ile Thr Leu Pro
           500
                              505
Thr Arq
<210> 4325
<211> 1405
<212> DNA
<213> Homo sapiens
<400> 4325
acgegtgeec ggggtetget gtgcagegea geeegttgtg gtgataegag eeggagatge
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180

cttctgcagg gactgtttca aggccttcta cgtccacaag ttcatagcca tgctgggcaa

gaaccggctc atctttccag gcgagaaggt agcgtctggg tcctgggggt ctgactgagc

ageotygece etegaggtee etgettgtee eteccaeagg eageetygee tgetgeagee

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cgccagctcc tccttggcct ttgaggacag actcgatgtc ctagatgtcc acgaggtggg
gtgtctgcct gtgttggagg tgcggtgccc tgagtgatgt tttttctccc ccaggtgctc
360
ttggcgtggt ctggggggcc ttcgtccagc tccatggtct ggcaggttct tgagggcctg
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gcagcctgtg gccagagcct agaggagaga tcaaagaccc tggccgaagt gaagcccatt
540
ctgcaagcaa ctgggttccc atggcatgtg gtggccttag aggaggtgtt cagcctgcca
ccgtcggtgc tttggtgctc tgcccaggag ctggtgggat ccgagggggc ctacaaggcg
660
gccgtggaca gcttcctcca gcagcagtat gtgctggggg ccggggggtgg tcctggcccg
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cetqueetg cecagactga ggetetttee caactgttet geteagtgag gacactgaet
qccaaggagg agcttctgca gaccctgcgg acccacctga tcctccacat ggcccgagcc
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1080
ttctacaacc gcctgttctc cgttccttct gtcttcacac cagccgtcga caccaaggcc
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1260
gtgtgtgctg tgtgcgggtg tgtgcgggtg gtgagctcac cactcgtgct caggccaggg
1320
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caagtgagaa gcttgtgaag ggccc
1405
<210> 4326
<211> 336
<212> PRT
<213> Homo sapiens
<400> 4326
Met Phe Phe Leu Pro Gln Val Leu Leu Ala Trp Ser Gly Gly Pro Ser
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1
Ser Ser Ser Met Val Trp Gln Val Leu Glu Gly Leu Ser Gln Asp Ser
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20
Ala Lys Arg Leu Arg Phe Val Ala Gly Val Ile Phe Val Asp Glu Gly
                            40
Ala Ala Cys Gly Gln Ser Leu Glu Glu Arg Ser Lys Thr Leu Ala Glu
                        55
Val Lys Pro Ile Leu Gln Ala Thr Gly Phe Pro Trp His Val Val Ala
                    70
                                        75
Leu Glu Glu Val Phe Ser Leu Pro Pro Ser Val Leu Trp Cys Ser Ala
               85
                                    90
Gln Glu Leu Val Gly Ser Glu Gly Ala Tyr Lys Ala Ala Val Asp Ser
           100
                                105
Phe Leu Gln Gln Gln Tyr Val Leu Gly Ala Gly Gly Pro Gly Pro
                           120
Thr Gln Gly Glu Glu Gln Pro Pro Gln Pro Pro Leu Asp Pro Gln Asn
                       135
Leu Ala Arg Pro Pro Ala Pro Ala Gln Thr Glu Ala Leu Ser Gln Leu
                   150
                                       155
Phe Cys Ser Val Arg Thr Leu Thr Ala Lys Glu Glu Leu Leu Gln Thr
                                   170
Leu Arg Thr His Leu Ile Leu His Met Ala Arg Ala His Gly Tyr Ser
                               185
Lys Val Met Thr Gly Asp Ser Cys Thr Arg Leu Ala Ile Lys Leu Met
                            200
Thr Asn Leu Ala Leu Gly Arg Gly Ala Phe Leu Ala Trp Asp Thr Gly
                       215
                                            220
Phe Ser Asp Glu Arg His Gly Asp Val Val Val Arg Pro Met Arg
                   230
                                       235
Asp His Thr Leu Lys Glu Val Ala Phe Tyr Asn Arg Leu Phe Ser Val
                245
                                    250
Pro Ser Val Phe Thr Pro Ala Val Asp Thr Lys Ala Pro Glu Lys Ala
                               265
Ser Ile His Arg Leu Met Glu Ala Phe Ile Leu Arg Leu Gln Thr Gln
                           280
Phe Pro Ser Thr Val Ser Thr Val Tyr Arg Cys Val Trp Val Cys Ala
                       295
Gly Gly Ala Arg Val Cys Ala Val Cys Gly Cys Val Arg Val Val Ser
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                                       315
Ser Pro Leu Val Leu Arg Pro Gly Leu Arg Val Glu Pro Gln Pro Val
               325
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<213> Homo sapiens

<400> 4327

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tgtgcaggtg gggaaattta gaccetgaaa aagggatgce etgagateae catgagattg 180

aggggcaagc agggctcacc ctgactggct cacttcccag gcacccccat gagcccaggc 240

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accgcctgcc accctcactc tccaggaaga gccaccgcgt ggtggccggg atcgtgtggt
ggccagggcg tetgacettg geteteacce ggaggccate caggtgetga ggatggetaa
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acctetggga gaggagggtg acteegacag ecettgeetg ecaggatgga geetggacte
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ccgcatcatg a
551
<210> 4328
<211> 107
<212> PRT
<213> Homo sapiens
<400> 4328
Met Pro Ser Arg Val Gln Ala Pro Ser Trp Gln Ala Arg Ala Val Gly
                                    10
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Val Thr Leu Leu Ser Gln Arg Trp Val Cys Pro Ile Val Val Ser Arg
Ala Thr Ser Ser Pro Trp Leu Cys Gly Leu Ser Val Ser His Pro Gln
His Leu Asp Gly Leu Arg Val Arg Ala Lys Val Arg Arg Pro Gly His
                        55
His Thr Ile Pro Ala Thr Thr Arg Trp Leu Phe Leu Glu Ser Glu Gly
                    70
Gly Arg Arg Cys Leu Gly Ser Trp Gly Cys Leu Gly Ser Glu Pro Val
                                     90
                85
Arg Val Ser Pro Ala Cys Pro Ser Ile Ser Trp
                                 105
            100
<210> 4329
<211> 3192
<212> DNA
<213> Homo sapiens
<400> 4329
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 tgtacctaaa actttggctc gaaagcgaat ctggaataaa aagtacccca tttgtatcga
gettggteag caagatgaet ttatgtetaa ageteagaet gataaggaga etteagaaga
 gaageegeca getggaggaa gggaggaeee ttagaageea eecegeeete aggaggaaea
 agatctagcc agcgagatca gatactctat ctctttggga gaactggccg agaaaaagag
 gaatggttta ggagatttat totggoatot aagotaaagt oggaaatcaa gaagtcatog
 420
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ggtgtctctg 480	gaggtaaacc	agggcttttg	cctgcacaca	gcagacacaa	cagtccgtcc
	cccacagccg	cagcagcagc	aaaggcagtg	tggaggagat	catgtcacag
ccaaagcaga 600	aggagctggc	aggcagcgtg	cggcagaaga	tgcttctcga	ctacagcgtg
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Gly Lys Glu Gly Cys Arg Pro Arg Ala Phe Cys Leu Ala Asp Ser Asp
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Gly His Arg Thr Ser Lys Ile Met Arg Phe Val Asp Lys Ile Thr Lys
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Ser Lys Tyr Phe Gln Lys Ala Thr Glu Thr Glu Phe Ile Lys Arg Xaa
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Glu Cys Arg Gly Thr Leu Ala Val Asn Ile Pro Pro Pro Pro Thr Asp
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Asn Ser Pro Phe Leu Asn Asn Val Glu Val Glu Gln Glu Ser Phe Phe
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Glu Gly Lys Asn Met Ala Leu Phe Glu Glu Glu Met Asp Ser Asn Pro
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                                        75
Met Val Ser Ser Leu Leu Asn Lys Leu Ala Asn Tyr Thr Asn Leu Ser
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                                   90
Gln Gly Val Val Glu His Glu Glu Asp Glu Glu Ser Arg Arg Glu
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Ala Lys Ala Pro Arg Met Gly Thr Phe Ile Gly Val Tyr Leu Pro Cys
                            120
                                               125
Leu Gln Asn Ile Leu Gly Val Ile Leu Phe Leu Arg Leu Thr Trp Ile
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                                           140
Val Gly Val Ala Gly Val Leu Glu Ser Phe Leu Ile Val Ala Met Cys
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Cys Thr Cys Thr Met Leu Thr Ala Ile Ser Met Ser Ala Ile Ala Thr
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                                   170
Asn Gly Val Val Pro Ala Gly Gly Ser Tyr Tyr Met Ile Ser Arg Ser
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Leu Gly Pro Glu Phe Gly Gly Ala Val Gly Leu Cys Phe Tyr Leu Gly
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Thr Thr Phe Ala Gly Ala Met Tyr Ile Leu Gly Thr Ile Glu Ile Phe
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Leu Thr Tyr Ile Ser Pro Gly Ala Ala Ile Phe Gln Ala Glu Ala Ala
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Gly Gly Glu Ala Ala Met Leu His Asn Met Arg Val Tyr Gly Thr
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Cys Thr Leu Val Leu Met Ala Leu Val Val Phe Val Gly Val Lys Tyr
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Leu	Ala 290	Ile	Tyr	Ala	Gly	Val 295	Ile	Lys	Ser	Ala	Phe 300	Asp	Pro	Pro	Asp
Ile 305	Pro	Val	Cys	Leu	Leu 310	Gly	Asn	Arg	Thr	Leu 315	Ser	Arg	Arg	Ser	Phe 320
Asp	Ala	Cys	Val	Lys 325	Ala	Tyr	Gly	Ile	His 330	Asn	Asn	Ser	Ala	Thr 335	Ser
		-	340		Phe	-		345					350		-
-		355			Gln		360					365	•		
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His 385	Ala	Gly	Ala	Phe	Val 390	Glu	Lys	Lys	Gly	Val 395	Pro	Ser	Val	Pro	Val 400
Ala	Glu	Glu	Ser	Arg 405	Ala	Ser	Ala	Leu	Pro 410	Tyr	Val	Leu	Thr	Asp 415	Ile
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Gly	Ile	Met 435	Ala	Gly	Ser	Asn	Arg 440	Ser	Gly	Asp	Leu	Lys 445	Asp	Ala	Gln
Lys	Ser 450	Ile	Pro	Thr	Gly	Thr 455	Ile	Leu	Ala	Ile	Val 460	Thr	Thr	Ser	Phe
Ile 465	Tyr	Leu	Ser	Cys	Ile 470	Val	Leu	Phe	Gly	Ala 475	Cys	Ile	Glu	Gly	Val 480
Val	Leu	Arg	Asp	Lys 485	Phe	Gly	Glu	Ala	Leu 490	Gln	Gly	Asn	Leu	Val 495	Ile
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Phe	Ser	Thr 515	Cys	Gly	Ala	Gly	Leu 520	Gln	Thr	Leu	Thr	Gly 525	Ala	Pro	Arg
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Thr	Val	Leu	Ile	Cys 565	Glu	Thr	Gly	Ile	Leu 570	Ile	Ala	Ser	Leu	Asp 575	Ser
			580		Ser			585			-	-	590		
Asn	Leu	Ala 595	Cys	Ala	Val	Gln	Thr 600	Leu	Leu	Arg		Pro 605	Asn	Trp	Arg
	610				Tyr	615	-			•	620		-		
625					Met 630					635					640
Ala	Met	Leu	Ile	Ala 645	Gly	Cys	Ile	Tyr	Lys 650	Tyr	Ile	Glu	Tyr	Arg 655	Gly
Ala	Glu	Lys	Glu 660	Trp	Gly	Asp	Gly	Ile 665	Arg	Gly	Leu	Ser	Leu 670	Asn	Ala
Ala	Arg	Tyr 675	Ala	Leu	Leu	Arg	Val 680	Glu	His	Gly	Pro	Pro 685	His	Thr	Lys
Asn	Trp	Arg	Pro	Gln	Val	Leu	Val	Met	Leu	Asn	Leu	Asp	Ala	Glu	Gln

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Gly Lys Gly Leu Thr Ile Val Gly Ser Val Leu Glu Gly Thr Tyr Leu
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Asp Lys His Met Glu Ala Gln Arg Ala Glu Glu Asn Ile Arg Ser Leu
                       745 750
Met Ser Thr Glu Lys Thr Lys Gly Phe Cys Gln Leu Val Val Ser Ser
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Ser Leu Arg Asp Gly Met Ser His Leu Ile Gln Ser Ala Gly Leu Gly
                 775
                                780
Gly Leu Lys His Asn Thr Val Leu Met Ala Trp Pro Ala Ser Trp Lys
              790
                             795 800
Gln Glu Asp Asn Pro Phe Ser Trp Lys Asn Phe Val Asp Thr Val Arg
          805 810 815
Asp Thr Thr Ala Ala His Gln Ala Leu Leu Val Ala Lys Asn Val Asp
      820
                       825
Ser Phe Pro Gln Asn Gln Glu Arg Phe Gly Gly His Ile Asp Val
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Trp Trp Ile Val His Asp Gly Gly Met Leu Met Leu Leu Pro Phe Leu
                 855
Leu Arg Gln His Lys Val Trp Arg Lys Cys Arg Met Arg Ile Phe Thr
    870
                             875
Val Ala Gln Val Asp Asp Asn Ser Ile Gln Met Lys Lys Asp Leu Gln
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                          890
Met Phe Leu Tyr His Leu Arg Ile Ser Ala Glu Val Glu Val Val Glu
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Met Val Glu Asn Asp Ile Ser Ala Phe Thr Tyr Glu Arg Thr Leu Met
   915 920 925
Met Glu Gln Arg Ser Gln Met Leu Lys Gln Met Gln Leu Ser Lys Asn
 930 935 940
Glu Gln Glu Arg Glu Ala Gln Leu Ile His Asp Arg Asn Thr Ala Ser
945 950 955 960
His Thr Ala Ala Ala Ala Arg Thr Gln Ala Pro Pro Thr Pro Asp Lys
          965 970 975
Val Gln Met Thr Trp Thr Arg Glu Lys Leu Ile Ala Glu Lys Tyr Arg
  980 985 990
Ser Arg Asp Thr Ser Leu Ser Gly Phe Lys Asp Leu Phe Ser Met Lys
     995 1000 1005
Pro Glu Trp Gly Asn Leu Asp Gln Ser Asn Val Arg Arg Met His Thr
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Ala Val Lys Leu Asn Gly Val Val Leu Asn Lys Ser Gln Asp Ala Gln
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Leu Val Leu Leu Asn Met Pro Gly Pro Pro Lys Asn Arg Gln Gly Asp
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Glu Asn Tyr Met Glu Phe Leu Glu Val Leu Thr Glu Gly Leu Asn Arg
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aacatgtata gtgccctctt ttgagtgatg ccgacagaca ccaagccctc cttttcacca
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Lys Glu Gly Leu Val Ser Val Gly Ile Thr Gln Lys Arg Ala Leu Tyr
                           40
Met Phe Ser Tyr Lys Tyr Ser Val Met Glu Lys His Ser Leu Asp Ala
                       55
Tyr Gly Ser Leu Arg Ser Phe Phe Phe His Pro Leu Phe Leu Glu Lys
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                   70
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240
accegactee etggaggegg eeaggacega eeetgteeeg acaaaatgga gtteeeegtg
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cctttcatct catttgccgt tgtccaaatt ctaatttaaa actcatgtgt tacttgctgt
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Thr Leu Gly Ala Trp Thr Glu Ser Ser Gly Gly Arg Ala Ala Gly Pro
                            40
                                                45
Gly Glu Arg Arg Thr Asp Phe Arg Gly Gly Pro Gly His Ala Ala
                        55
Glu Thr Thr Arg Leu Pro Gly Gly Gly Gln Asp Arg Pro Cys Pro Asp
Lys Met Glu Phe Pro Val Trp Leu Gln Leu Ala Ala Arg Ser Gln Ser
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Ser Ser Val Ile Arg Leu Ser Asp Cys Ser Pro Phe Ile Ser Phe Ala
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                                105
Val Val Gln Ile Leu Ile
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cgtctgcatg agcagaagct ggtgcagcat gtggtgtctc agaactgtga cgggctccac
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ctgaggagtg ggctgncgcg cacggccatc tccgagctcc acgggaacat gtacattgaa
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Gln Lys Gly Arg Ser Val Ser Ala Ala Asp Xaa Glu Arg Ala Glu Pro
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           20
Thr Leu Thr His Met Ser Ile Thr Arg Leu His Glu Gln Lys Leu Val
                           40
Gln His Val Val Ser Gln Asn Cys Asp Gly Leu His Leu Arg Ser Gly
                                           60
Leu Xaa Arg Thr Ala Ile Ser Glu Leu His Gly Asn Met Tyr Ile Glu
                                       75
Gly Val Arg Ala Gly Val Arg Cys Asp Gly Ala His Cys Pro Pro Gln
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               85
Thr Pro Asp Arg Pro Asp Leu Pro Gln Val Trp Asp Pro Ala Ala Gly
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His His Cys Ala
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Ala Ala Gly Pro Ala Ala Gln Ser Arg Pro Leu Arg Pro Ala Glu Ala
Arg Gln Cys Arg Gly Arg Ser Arg Arg Arg Val Ala Arg Ser Ser Leu
Pro Ser Pro Ser Ala Arg Pro Gly Arg Gly Gly Arg Pro Gly Pro Gly
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                                             60
Gly Ser Ala Gly Cys Pro Gly Leu
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1080
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gtgecaceca caggggeetg getgeatege etceaggaag ceetggetge egggaggge
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Gly Pro Arg Leu Trp His Gly Thr Cys Pro Ser Ala Gln His Gly Pro
    50
                        55
Gly Ala Thr Leu Leu Ala Glu Gly Gln Gly Pro Leu Cys Arg Gln Trp
                                        75
Gly Gly Pro Arg Phe Pro Asp Arg Gly Arg Gln Gly Thr Gly Glu
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1380
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1440				taatttagct	
cctaaaaagt 1500	aaacattata	aaaatgaacc	tgaaaagagt	cttagggagt	ctgatctcac
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Glv	Cve		Dhe	Thr	Ile	Lvs		Ser	Δla	Ara	Lvs		His	Glu	Glv
GLY	210	110		****	110	215	204		****	••••	220				<b>4-1</b>
Ser		Asp	Tvr	Ara	Pro		Ara	Cvs	Pro	Asn		Pro	Ser	Cvs	Pro
225	0,0		- 1 -		230		5	-1-		235				- 4	240
	Leu	Leu	Ara	Met	Asn	Leu	Glu	Ala	His		Lvs	Glu	Cys	Glu	
				245					250		•		•	255	
Ile	Lys	Cys	Pro	His	Ser	Lys	Tyr	Gly	Cys	Thr	Phe	Ile	Gly	Asn	Gln
	•	•	260			-	-	265					270		
Asp	Thr	Tyr	Glu	Thr	His	Leu	Glu	Thr	Cys	Arg	Phe	Glu	Gly	Leu	Lys
		275					280					285			
Glu	Phe	Leu	Gln	Gln	Thr	Asp	Asp	Arg	Phe	His	Glu	Met	His	Val	Ala
	290					295					300	•			
Leu	Ala	Gln	Lys	Asp	Gln	Glu	Ile	Ala	Phe	Leu	Arg	Ser	Met	Leu	
305					310				_	315			_		320
Lys	Leu	Ser	Glu	-	Ile	Asp	Gln	Leu		Lys	Ser	Leu	Glu		Lys
	_		_	325		_	~ 1	_	330	_		~1		335	
Phe	Asp	Val		Asp	Glu	Asn	Gin		Lys	Leu	Ser	GIu	-	Leu	Met
G1	Dh.	3	340	*	×1	Com	Mot	345	7.00	700	C1	T 011	350	uic	Tla
GIU	Pne	355	Arg	Asp	Ala	ser	360	Leu	ASII	Asp	GIU	365	Ser	nis	TIE
7.00	ב [ ת		Tau	λen	Met	Glv		T.an	Glv	Ser	Tur		Pro	Gln	Gln
MSII	370	Arg	Deu	ASII	Mec	375	116	Leu	GIY	261	380	nsp	110	01	Q111
Tle		Lvs	Cvs	Lvs	Gly		Phe	Val	Glv	His		Glv	Pro	Val	Tro
385		_,_	-7-	-1-	390				1	395		1			400
	T 011											_		_	_
	Leu	CVS	vaı	Tyr	Ser	Met	Gly	Asp	Leu	Leu	Phe	Ser	Gly	Ser	Ser
Суз	Leu	Cys	Vai	Tyr 405	Ser	Met	Gly	Asp	Leu 410	Leu	Phe	Ser	Gly	Ser 415	Ser
_				405	Ser Val				410					415	
_				405					410					415	
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Asp Lys Gly Asp 465 Pro	Lys Thr Cys 450 Ile Val	Thr Leu 435 Lys Gln Cys Ala	Ile 420 Glu Leu Asn Thr	405 Lys Gly Tyr Leu Leu 485 Lys	Val His Ser Gln 470 Val	Trp Asp Gly 455 Lys Ser Trp	Asp Gly 440 Ser Val Ser Asp	Thr 425 Ile Ala Asn His Ile 505	410 Cys Val Asp Thr Asn 490 Val	Thr Leu Cys Ile 475 Val	Thr Ala Thr 460 Arg Leu Thr	Tyr Leu 445 Ile Ala Phe Glu	Lys 430 Cys Ile His Ser Leu 510	415 Cys Ile Val Asp Gly 495 Lys	Gln Gln Trp Asn 480 Ser Leu
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Asp Lys Gly Asp 465 Pro Leu Lys Ala Asp 545	Lys Thr Cys 450 Ile Val Lys Lys Gln 530 Ile	Thr Leu 435 Lys Gln Cys Ala Glu 515 Ser Arg	Ile 420 Glu Leu Asn Thr Ile 500 Leu Tyr	405 Lys Gly Tyr Leu 485 Lys Thr Leu Leu	Val His Ser Gln 470 Val Val Gly Tyr	Trp Asp Gly 455 Lys Ser Trp Leu Ser 535 Cys	Asp Gly 440 Ser Val Ser Asp Asn 520 Gly	Thr 425 Ile Ala Asn His 505 His Ser	410 Cys Val Asp Thr Asn 490 Val Trp Tyr Val	Thr Leu Cys Ile 475 Val Gly Val Gln Leu 555	Thr Ala Thr 460 Arg Leu Thr Arg Gln	Tyr Leu 445 Ile Ala Phe Glu Ala 525 Ile Thr	Lys 430 Cys Ile His Ser Leu 510 Leu Lys	115 Cys Ile Val Asp Gly 495 Lys Val Ile Gly Gly	Gln Gln Trp Asn 480 Ser Leu Ala Trp Gly 560
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Asp Lys Gly Asp 465 Pro Leu Lys Ala Asp 545 Ser	Lys Thr Cys 450 Ile Val Lys Lys Gln 530 Ile Val	Thr Leu 435 Lys Gln Cys Ala Glu 515 Ser Arg	Ile 420 Glu Leu Asn Thr Ile 500 Leu Tyr Thr Ser Leu	405 Lys Gly Tyr Leu 485 Lys Thr Leu Leu 11e 565	Val His Ser Gln 470 Val Val Gly Tyr Asp 550 Ala	Trp Asp Gly 455 Lys Ser Trp Leu Ser 535 Cys Val	Asp Gly 440 Ser Val Ser Asp Asn 520 Gly Ile	Thr 425 Ile Ala Asn His Ile 505 His Ser His Asn	410 Cys Val Asp Thr Asn 490 Val Trp Tyr Val His 570	Thr Leu Cys Ile 475 Val Gly Val Gln Leu 555 His	Thr Ala Thr 460 Arg Leu Thr Arg Gln Ile	Tyr Leu 445 Ile Ala Phe Glu Ala 525 Ile Thr	Lys 430 Cys Ile His Ser Leu 510 Leu Lys Ser Cys Glu	415 Cys Ile Val Asp Gly 495 Lys Val Ile Gly Gly 575	Gln Gln Trp Asn 480 Ser Leu Ala Trp Gly 560
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Asp Lys Gly Asp 465 Pro Leu Lys Ala Asp 545 Ser Tyr	Lys Thr Cys 450 Ile Val Lys Gln 530 Ile Val Glu Thr	Thr Leu 435 Lys Gln Cys Ala Glu 515 Ser Arg Tyr Asn Leu 595	Ile 420 Glu Leu Asn Thr Ile 500 Leu Tyr Thr Ser Leu 580 Thr	405 Lys Gly Tyr Leu Leu 485 Lys Thr Leu Ile 565 Ile Gly	Val His Ser Gln 470 Val Val Gly Tyr Asp 550 Ala His	Trp Asp Gly 455 Lys Ser Trp Leu Ser 535 Cys Val Val	Asp Gly 440 Ser Val Ser Asp Asn 520 Gly Ile Thr Trp Gly 600	Thr 425 Ile Ala Asn His 505 His Ser His Asn Asp 585 Thr	A10 Cys Val Asp Thr Asn 490 Val Trp Tyr Val His 570 Ile Val	Thr Leu Cys Ile 475 Val Gly Val Gln Leu 555 His Glu Tyr	Thr Ala Thr 460 Arg Leu Thr Arg Thr 540 Gln Ile Ser Ala	Tyr Leu 445 Ile Ala Phe Glu Ala 525 Ile Thr Val Lys Leu 605	Lys 430 Cys Ile His Ser Leu 510 Leu Lys Ser Cys Glu 590 Ala	A15 Cys Ile Val Asp Gly 495 Lys Val Ile Gly 575 Gln Val	Gln Gln Trp Asn 480 Ser Leu Ala Trp Gly 560 Thr

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615
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Leu Arg Val Trp Ser Met Asp Asn Met Ile Cys Thr Gln Thr Leu Leu
                                        635
                    630
Arq His Gln Gly Ser Val Thr Ala Leu Ala Val Ser Arg Gly Arg Leu
                                    650
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Phe Ser Gly Ala Val Asp Ser Thr Val Lys Val Trp Thr Cys
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acceptgtaca gcatcegega ggacegegaag gtaggegegt ccaggattca gataagagag
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Asp Met Gln Gln His Glu Cys Ala Met Ser Trp Arg Ala His Tyr Gly
Glu Val Tyr Ser Val Glu Phe Ser Tyr Asp Glu Asn Thr Val Tyr Ser
Ile Gly Glu Asp Gly Lys Val Gly Gly Ser Arg Ile Gln Ile Arg Glu
His Arg Asp Asp Met Trp Ala Gly Cys Arg Leu Trp Pro Tyr Leu Leu
Leu Ala Leu Gln Pro Gly Ala Ser Phe Cys Ser Phe Val Ile Cys Arg
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Phe Arg Gly Gln Leu Val Gln Pro Ala Gly Ser Val Gln Ile Pro Asp
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Asn His Ser Ser Thr Arg Ala Gln Arg Pro Gly Pro Gly Arg Ser
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Asp Lys Gly Ser Gln Val Glu Ile Val Thr Asp Asp Ile Lys Pro Gly
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Val Ala Ile Gly Gly Thr Ser Phe Pro Thr Tyr Tyr Arg Ser Met Tyr
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                                            60
Pro Lys Glu Val Ile Met Thr Gly Asp Met Met Leu Glu Lys Val Tyr
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Ala Lys Glu Glu Arg Val Val Asp Gln Val Val Glu Asn Gly Val
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Arg Pro Asp Glu Glu Ile Tyr Tyr Gly Leu Lys Glu Gly Ser Arg Asn
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                           120
Lys Gly Gln Ile Asp Val Glu Ala Leu Phe Ala Ile Lys Pro Gln Pro
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ggagctggtg gggctggccg cggggaggat gaagagaacc gagagcaccg tgtccgcagg
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Ala Gly Arg Gly Glu Asp Glu Glu Asn Arg Glu His Arg Val Arg Arg
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Gln Ile Val Phe Lys Asp
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Pro Leu Leu Asp Leu Lys Glu Gly Ile Asp Gln Leu Glu Asn Asn Lys
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Thr Leu Gly Phe Ile Leu Ser Thr Leu Leu Ala Ile Gly Asn Phe Leu
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Pro Glu Val Lys Asp Thr Val His Lys Gln Ser Leu Leu His His Val
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Cys Thr Met Val Val Glu Asn Phe Pro Asp Ser Ser Asp Leu Tyr Ser
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Glu Ile Gly Ala Ile Thr Arg Ser Ala Lys Val Asp Phe Asp Gln Leu
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Gln Asp Asn Leu Cys Gln Met Glu Arg Arg Cys Lys Ala Ser Trp Asp
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His Leu Lys Ala Ile Ala Lys His Glu Met Lys Pro Val Leu Lys Gln
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Arg Met Ser Glu Phe Leu Lys Asp Cys Ala Glu Arg Ile Ile Leu
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 Lys Ile Val His Arg Arg Ile Ile Asn Arg Phe His Ser Phe Leu Leu
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 Phe Met Gly His Pro Pro Tyr Ala Ile Arg Glu Val Asn Ile Asn Lys
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 Phe Cys Arg Ile Ile Ser Glu Phe Ala Leu Glu Tyr Arg Thr Thr Arg
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 Glu Arg Val Leu Gln Gln Lys Gln Lys Arg Ala Asn His Arg Glu Arg
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 Asn Lys Thr Arg Gly Lys Met Ile Thr Asp Ser Gly Lys Phe Ser Gly
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 Ser Ser Pro Ala Pro Pro Ser Gln Pro Gln Gly Leu Ser Tyr Ala Glu
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Asp Ala Ala Glu His Glu Asn Met Lys Ala Val Leu Lys Thr Ser Ser
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Arg Ser Phe Asp His Ser Gly Lys Asp Thr Glu Arg Glu His Glu Pro
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Pro Tyr Glu Ile Ser Val Gln Glu Glu Ile Thr Ala Arg Leu His Phe
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Ile Lys Phe Glu Asn Thr Tyr Ile Glu Ala Cys Leu Asp Phe Ile Lys
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Asp His Leu Val Asn Thr Glu Thr Lys Val Ile Gln Ala Thr Gly Gly
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Gly Ala Tyr Lys Phe Lys Asp Leu Ile Glu Glu Lys Leu Arg Leu Lys
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Val Asp Lys Glu Asp Val Met Thr Cys Leu Ile Lys Gly Cys Asn Phe
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Val Leu Lys Asn Ile Pro His Glu Ala Phe Val Tyr Gln Lys Asp Ser
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Asp Pro Glu Phe Arg Phe Gln Thr Asn His Pro His Ile Phe Pro Tyr
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Glu Asp Arg Phe Glu Trp Val Gly Gly Ser Ser Ile Gly Gly Gly Thr
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Phe Trp Gly Leu Gly Ala Leu Leu Thr Lys Thr Lys Lys Phe Asp Glu
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Gly Leu Ile Ala Pro Gly Pro Thr Thr Ala Val Ser Tyr Met Ser Val
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Lys Cys Val Asp Ala Arg Lys Asn His His Lys Thr Lys Trp Phe Val
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Pro Trp Gly Pro Asn His Cys Asp Lys Ile Arg Asp Ile Glu Glu Ala
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Ile Pro Arg Glu Ile Glu Ala Asn Asp Ile Val Phe Ser Val His Ile
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Pro Leu Pro His Met Glu Met Ser Pro Trp Phe Gln Phe Met Leu Phe
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Asn Ala Glu Val Ser Met Asp Val Ser Leu Ala Tyr Arg Asp Asp Ala
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Phe Ala Glu Trp Thr Glu Met Ala His Glu Arg Val Pro Arg Lys Leu
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Lys Cys Thr Phe Thr Ser Pro Lys Thr Pro Glu His Glu Gly Arg Tyr
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Tyr Glu Cys Asp Val Leu Pro Phe Met Glu Ile Gly Ser Val Ala His
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Lys Phe Tyr Leu Leu Asn Ile Arg Leu Pro Val Asn Glu Lys Lys
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His Gln Asn Gly Gly Phe Thr Lys Val Trp Phe Ala Met Lys Thr Phe
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Leu Thr Pro Ser Ile Phe Ile Ile Met Val Trp Tyr Trp Arg Arg Ile
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Glu Thr Arg Trp Pro Ile Val Tyr Ser Pro Arg Tyr Asn Ile Thr Phe
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Met Gly Leu Glu Lys Leu His Pro Phe Asp Ala Gly Lys Trp Gly Lys
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Val Ile Asn Phe Leu Lys Glu Glu Lys Leu Leu Ser Asp Ser Met Leu
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Arg Arg Tyr Leu Asn Glu Leu Lys Trp Ser Phe Ala Val Ala Thr Ile
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Gly Lys Leu Ala Val Glu Arg Gly Trp Ala Ile Asn Val Gly Gly Gly
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Phe His His Cys Ser Ser Asp Arg Gly Gly Phe Cys Ala Tyr Ala
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Val Val Val Tyr Asn Ala Gly Thr Asp Ile Leu Glu Gly Asp Arg Leu
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Val Phe Arg Met Val Arg Gly Arg Arg Val Pro Ile Leu Met Val Thr
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Gly Glu Ala Gly Thr Phe Asp Val Ala Val Val Asp Ala Asp Lys Glu
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Gly Ile Leu Ala Val Leu Arg Val Leu Trp Arg Gly Lys Val Leu Gln
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Pro Pro Lys Gly Asp Val Ala Ala Glu Cys Val Arg Asn Leu Asn Glu
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Ser Gly Val Glu Arg Leu Arg Asn Pro Asp Leu Ile Gln Ala Gly Tyr
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Lys	Met	Ser	Leu	Gln	Val	Ile	Lys	Glu	Asn	Leu	Pro	Glu	Asn	Val	Thr
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Ala	Ser	Glu	Ser	Asp	Ala	Glu	Val	Glu	Arg	Ser	Gln	Asp	Asp	Gln	His
			260					265					270		
Met	Leu	Pro	Phe	Trp	Thr	Asp	Leu	Cys	Ser	Ile	Phe	Gly	Ser	Asn	Lys
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Asp	Leu	Met	Gly	Leu	Ala	Ile	Asn	Asp	Ser	Phe	Leu	Ser	Ala	Ser	Leu
	290					295					300				_
Val	Arg	Ile	Leu	Cys	Glu	Gln	Ile	Ala	Ser		Thr	Cys	His	Leu	
305					310				_	315			_	_	320
Arg	Val	Val	Phe		Asn	Ile	Ser	Pro		Asp	Ala	His	Arg		Leu
			_	325			•	_	330		<b>-</b> 1	<b></b>	<b>-</b>	335	
Xaa	Pro	Xaa		Leu	Arg	Gly	His		Thr	vai	Thr	Tyr		Thr	Leu
		_	340	-1				345	B	77.	T 011	C1.0	350	17-1	Lou
Gln	Gly		Asp	GIn	Asp	Asp		Pne	Pro	Ala	Leu	365	GIU	val	Leu
•	***	355	G1	C	Asn	T 011	360	T	Lon	Clv	Len		Ser	Cve	Ser
Arg		Pro	GIU	Cys.	ASII	375	Arg	ıyı	пеп	Gry	380	val	561	Cys	501
21-	370	Thr	Cl n	Gln	Trp		Asn	Len	Ser	Leu		Leu	Glu	Val	Asn
385	TILL	1111	GIII	0111	390			200	-	395					400
	Ser	ĭ.en	Thr	Cvs	Val	Asn	Leu	Ser	Asp		Glu	Leu	Leu	Asp	Glu
GIII	501			405					410					415	
Glv	Ala	Lvs	Leu		Tvr	Thr	Thr	Leu			Pro	Lys	Cys	Phe	Leu
0-1		-2-	420		•			425	_			_	430		
Gln	Arq	Leu	Ser	Leu	Glu	Asn	Cys	His	Leu	Thr	Glu	Ala	Asn	Cys	Lys
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Gly	Leu	Arg	Tyr	Pro	Glu	Cys	Lys	Leu	Gln	Thr	Leu	Val	Leu	Trp	Asn
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Cys	Asp	Ile	Thr	Ser	Asp	Gly	Cys	Cys	Asp	Leu	Thr	Lys			Gln
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Glu	Lys	Ser	Ser	Leu	Leu	Cys	Leu	Asp	Leu	Gly	Leu	Asn	His	Ile	Gly
		515					520					525			_
Val	T	Gly	Met	Lys	Phe	Leu	Cys	Glu	Ala	Leu			Pro	Leu	Cys
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	530					535			_	_	540		_		<b>.</b>
	530 Leu				Trp	Leu		Gly	Cys				Pro	Phe	Ser
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 Lys Ile Asp Asp Phe Asn Asp Glu Leu Asn Lys Leu Leu Glu Glu Ile
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1080
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Phe Ser Ala His Tyr Asp Ala Val Glu Ala Glu Leu Lys Ser Ser Ala
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Val Gly Leu Val Thr Leu Asn Asp Met Lys Ala Arg Gln Glu Ala Leu
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65
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Gln Arg Leu Gln Gln Glu Arg Gln Arg Glu Gln Glu Gln Arg Arg Glu
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            100
Arg Lys Arg Lys Ile Ser Cys Leu Ser Phe Ala Leu Asp Asp Leu Asp
                            120
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Asp Gln Ala Asp Ala Ala Glu Ala Arg Arg Ala Gly Asn Leu Gly Lys
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                                             140
Asn Pro Asp Val Asp Thr Ser Phe Leu Pro Asp Arg Asp Arg Glu Glu
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                                        155
Glu Glu Asn Arg Leu Arg Glu Glu Leu Arg Gln Glu Trp Glu Ala Gln
                                    170
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Arg Glu Lys Val Lys Asp Glu Glu Met Glu Val Thr Phe Ser Tyr Trp
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Asp Gly Ser Gly His Arg Arg Thr Val Arg Val Arg Lys Gly Asn Thr
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Val Gln Gln Phe Leu Lys Lys Ala Leu Gln Gly Leu Arg Lys Asp Phe
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215
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Leu Glu Leu Arg Ser Ala Gly Val Glu Gln Leu Met Phe Ile Lys Glu
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Asp Leu Ile Leu Pro His Tyr His Thr Phe Tyr Asp Phe Ile Ile Ala
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                245
Arg Ala Arg Gly Lys Ser Gly Pro Leu Phe Ser Phe Asp Val His Asp
                                                     270
                                265
Asp Val Arg Leu Leu Ser Asp Ala Thr Met Glu Lys Asp Glu Ser His
                            280
                                                 285
Ala Gly Lys Val Val Leu Arg Ser Trp Tyr Glu Lys Asn Lys His Ile
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Lys Tyr Thr Ile Arg
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                                                 45
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                                         75
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Val Leu Gln Glu Ala Gln Arg His Ala Glu Asn
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Ser Ser Trp Ser Gly Phe Cys Gly Ile Ser Pro Ala Phe Ser Ala Phe
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<210> 4388
<211> 113
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Ser His Pro Lys Lys Pro Pro Pro Pro Gly Xaa Gly Gly Arg Gly
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Gly Gly Phe Phe Pro Pro Pro Pro Pro Lys Lys Thr Arg Lys
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Ile Phe Phe Pro Pro Pro Lys Lys Lys Lys Pro Gly Gly Pro
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                                 75
Pro Phe Phe Gly Gly Gly Phe Phe Phe Phe Phe Phe Phe Phe Phe
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	aactttgttt	ttgtggaagt	: aagaaagtta	tctactagat	tatttcctct

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Asn Ser Leu Ala Gly Pro Gly Leu Pro Ala Met Asn Met Gly Pro Gly
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Val Arg Gly Pro Trp Ala Ser Pro Ser Gly Asn Ser Ile Pro Tyr Ser
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Ser Ser Ser Pro Gly Ser Tyr Thr Gly Pro Pro Gly Gly Gly Pro
                                    90
Pro Gly Thr Pro Ile Met Pro Ser Pro Gly Asp Ser Thr Asn Ser Ser
           100
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Glu Asn Met Tyr Thr Ile Met Asn Pro Ile Gly Gln Gly Ala Gly Arg
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Ala Asn Phe Pro Leu Gly Pro Gly Pro Glu Gly Pro Met Ala Ala Met
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Ser Ala Met Glu Pro His His Val Asn Gly Ser Leu Gly Ser Gly Asp
                   150
                                       155
Met Asp Gly Leu Pro Lys Ser Ser Pro Gly Ala Val Ala Gly Leu Ser
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               165
Asn Ala Pro Gly Thr Pro Arg Asp Asp Gly Glu Met Ala Ala Gly
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Thr Phe Leu His Pro Phe Pro Ser Glu Ser Tyr Ser Pro Gly Met Thr
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Glu Lys Leu Gln Arg Val Leu Glu Lys Ala Ala Leu Lys Leu Gly Arg
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Pro Thr Leu Ser Ser Glu Val Gly Ile Ile Ile Cys Asp Ile Ala Asn
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Pro Ala Ser Leu Asp Glu Met Ala Lys Gln Ala Thr Val Val Leu Asn
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Cys Val Gly Pro Tyr Arg Phe Tyr Gly Glu Pro Val Ile Lys Ala Cys
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Ile Glu Asn Gly Ala Ser Cys Ile Asp Ile Ser Gly Glu Pro Gln Phe
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Leu Glu Leu Met Gln Leu Lys Tyr His Glu Lys Ala Ala Asp Lys Gly
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Val Tyr Ile Ile Gly Ser Ser Gly Phe Asp Ser Ile Pro Ala Asp Leu
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Gly Val Ile Tyr Thr Arg Asn Lys Met Asn Gly Thr Leu Thr Ala Val
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Glu Ser Phe Leu Thr Ile His Ser Gly Pro Glu Gly Leu Ser Ile His
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Asp Gly Thr Trp Lys Ser Ala Ile Tyr Gly Phe Gly Asp Gln Ser Asn
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Leu Arg Lys Leu Arg Asn Val Ser Asn Leu Lys Pro Val Pro Leu Ile
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Gly Pro Lys Leu Lys Arg Arg Trp Pro Ile Ser Tyr Cys Arg Glu Leu
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Lys Gly Tyr Ser Ile Pro Phe Met Gly Ser Asp Val Ser Val Val Arg
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Arg Thr Gln Arg Tyr Leu Tyr Glu Asn Leu Glu Glu Ser Pro Val Gln
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Tyr Ala Ala Tyr Val Thr Val Gly Gly Ile Thr Ser Val Ile Lys Leu
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Met Phe Ala Gly Leu Phe Phe Leu Phe Phe Val Arg Phe Gly Ile Gly
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Arg Gln Leu Leu Ile Lys Phe Pro Trp Phe Phe Ser Phe Gly Tyr Phe
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Ser Lys Gln Gly Pro Thr Gln Lys Gln Ile Asp Ala Ala Ser Phe Thr
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Leu Thr Phe Phe Gly Gln Gly Tyr Ser Gln Gly Thr Gly Thr Asp Lys
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Asn Lys Pro Asn Ile Lys Ile Cys Thr Gln Val Lys Gly Pro Glu Ala
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Gly Tyr Val Ala Thr Pro Ile Ala Met Val Gln Ala Ala Met Thr Leu
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Leu Ser Asp Ala Ser His Leu Pro Lys Ala Gly Gly Val Phe Thr Pro
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1200

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Ser Thr Glu Ser Ile Arg Leu Glu Val Gly Val Thr Gly Glu Ser Gly
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Ala Gly Lys Ser Ser Leu Ile Asn Ala Leu Arg Gly Leu Glu Ala Glu
Asp Pro Gly Ala Ala Leu Thr Gly Val Met Glu Thr Thr Met Gln Pro
Ser Pro Tyr Pro His Pro Gln Phe Pro Asp Val Thr Leu Trp Asp Leu
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Pro Gly Ala Gly Ser Pro Gly Cys Pro Ala Asp Lys Tyr Leu Lys Gln
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Val Asp Phe Ser Arg Tyr Asp Phe Phe Leu Leu Val Ser Pro Arg Arg
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Cys Gly Ala Val Glu Thr Arg Leu Ala Ala Glu Ile Leu Cys Gln Gly
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Lys Lys Phe Tyr Phe Val Arg Thr Lys Val Asp Glu Asp Leu Ala Ala
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                                   170
Thr Arg Thr Gln Arg Pro Ser Gly Phe Arg Glu Ala Ala Val Leu Gln
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220

185

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180

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Arg His Ala Gly Leu Leu Ser Leu Pro Asp Ile Ser Leu Glu Ala Leu
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Val Leu Gly Val Ile Gln Ala Leu Pro Val Pro Gly Leu Ala Ala Ala
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Tyr Asp Asp Ala Leu Leu Ile His Ser Leu Arg Gly Tyr His Arg Ser
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                                            300
Phe Gly Leu Asp Asp Asp Ser Leu Ala Lys Leu Ala Glu Gln Val Gly
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Lys Gln Ala Gly Asp Leu Arg Ser Val Ile Arg Ser Pro Leu Ala Asn
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Glu Val Ser Pro Glu Thr Val Leu Arg Leu Tyr Ser Gln Ser Ser Asp
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Gly Ala Met Arg Val Ala Arg Ala Phe Glu Arg Gly Ile Pro Val Phe
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Gly Thr Leu Val Ala Gly Gly Ile Ser Phe Gly Ala Val Tyr Thr Met
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Leu Gln Gly Cys Leu Asn Glu Met Ala Glu Asp Ala Gln Arg Val Arg
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Ile Lys Ala Leu Glu Asp Asp Glu Pro Gln Pro Glu Val Ser Leu Glu
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Val Ala Ser Asp Asn Gly Val Glu Lys Gly Gly Ser Gly Glu Gly Gly
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Ser Ser Glu Arg Ile Ile Ala Pro Met Arg Trp Gly Leu Val Pro Ser
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Trp Phe Lys Glu Ser Asp Pro Ser Lys Leu Gln Phe Asn Thr Thr Asn
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 Cys Arg Ser Asp Thr Val Met Glu Lys Arg Ser Phe Lys Val Pro Leu
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 Gly Lys Gly Arg Arg Cys Val Val Leu Ala Asp Gly Phe Tyr Glu Trp
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 Pro Glu Asn Trp Glu Lys Val Trp Asp Asn Trp Arg Leu Leu Thr Met
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 Ala Gly Ile Phe Asp Cys Trp Glu Pro Pro Glu Gly Gly Asp Val Leu
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 Ile His His Arg Met Pro Ala Ile Leu Asp Gly Glu Glu Ala Val Ser
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Ile His Pro Thr Glu Asn Ile Thr Phe His Ala Val Ser Ser Val Val
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Asn Asn Ser Arg Asn Asn Thr Pro Glu Cys Leu Ala Pro Val Asp Leu
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Val Val Lys Lys Glu Leu Arg Ala Ser Gly Ser Ser Gln Arg Met Leu
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Gln Trp Leu Ala Thr Lys Ser Pro Lys Lys Glu Asp Ser Lys Thr Pro
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Gln Lys Glu Glu Ser Asp Val Pro Gln Trp Ser Ser Gln Phe Leu Gln
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Lys Ser Pro Leu Pro Thr Lys Arg Gly Thr Ala Gly Leu Leu Glu Gln
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Ser Ser Pro Lys Arg Glu Leu Pro Pro Gly Ile Gly Asp Met Val Glu
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Leu Met Gly Val Gln Asp Gln His Met Asp Glu Arg Asp Val Arg Arg
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Phe Gln Leu Lys Ile Ala Glu Leu Asn Ser Val Ile Arg Lys Leu Glu
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Asp Arg Asn Thr Leu Leu Ala Asp Glu Arg Asn Glu Leu Leu Lys Arg
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Lys Leu Ser Ala Gln Ala Ser Leu Lys Arg His Thr Ser Leu Asn Asp
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Arg Leu His Phe Ile Pro Arg Leu Gly Ser Arg Ala Asp Leu Ile Lys
Gln Tyr Gly Arg Trp Ala Val Val Ser Gly Ala Thr Asp Gly Ile Gly
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Lys Ala Tyr Ala Glu Glu Leu Ala Ser Arg Gly Leu Asn Ile Ile Leu
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Ile Ser Arg Asn Glu Glu Lys Leu Gln Val Val Ala Lys Asp Ile Ala
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Asp Thr Tyr Lys Val Glu Thr Asp Ile Ile Val Ala Asp Phe Ser Ser
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Gly Arg Glu Ile Tyr Leu Pro Ile Arg Glu Ala Leu Lys Asp Lys Asp
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Val Gly Ile Leu Val Asn Asn Val Gly Val Phe Tyr Pro Tyr Pro Gln
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Tyr Phe Thr Gln Leu Ser Glu Asp Lys Leu Trp Asp Ile Ile Asn Val
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Asn Ile Ala Ala Ser Leu Met Val His Val Val Leu Pro Gly Met
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Val Glu Arg Lys Lys Gly Ala Ile Val Thr Ile Ser Ser Gly Leu Leu
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Leu Gln Pro Thr Pro Gln Leu Ala Ala Phe Ser Ala Ser Lys Ala Tyr
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λer	Ser	- 1.00	LVS	His	Ser	Glv	/ Ser	Asp	Ser	Ser	Gly	Arg	Sex	Ser	Ser
raf	, DCI	y.	, L.y.	725					730	)	_			735	i
G1.		- D~				r Tars	e Glu	Live			Lvs	Lvs	Pro	Lys	His
GIU	. JeI	. P.L.(	740					745			., -	4	750	) -	
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ser	Arg			, 561	. va.	الدى	760			<b></b> -9	, ~	765	5	- 2 -	
_		75			. c.	~ T			, Car	- Arc	5	. • •			
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Arg Asn Gly Phe Arg His Val Leu Ser Gln Gln Glu Ile Asp Phe Phe
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Gln Lys Lys Val Lys Gln Met Val Glu Glu Ile Glu Ser Leu Lys Lys
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Lve	Glv	Gln	Glu		Glv	Glv	Phe	Phe	Glu	Asp	Ala	Ser	Gln	Tyr	Asp
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Ile	Ala	Thr	Pro	Gly	Arg	Leu	Ile	Asp		Leu	His	Asn	Cys		Ser
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Ýhe	His	Leu	Ser	Ser	Ile	Glu	Val		Ile	Leu	Asp	Glu		Asp	Arg
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		Lys	Asp	Leu		ser	vai	sei	Leu	395	Asn	FIO	,va1	vrā	400
385		•	G	· 	390	7.00	W-1	ח ח	Dro		Leu	Δτα	Gln	Glu	
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-1-	*	*1-	7 ~~~			7 200	Clu	Glv			Glu	Δla	Tle		Ala
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Trp			Lys	Pro	Pne	695		116	Буз	FIO	Pro 700	<i></i>	2,2		
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C1 -	, p	83! . Va	כ 1 איי	<sub>ፕ</sub> አምሳ	7 27	η Δνα			ı Ser	r Sei	c Phe			Ası	a Asn
GII	850		- 47	, 41,	2 4743	85		,			860	)			
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		275				•	280			•	•	285			
Lvs	Val	Arg	Lvs	Gln	Thr	Lvs	Glv	Leu	Tvr	Pro	Ala	Pro	Leu	Lvs	Ile
	290		-1			295	- 4		- 2		300			_,	
Ile	Asp	Val	Val	Lys	Thr	Gly	Ile	Glu	Gln	Gly	Ser	Asp	Ala	Gly	Tyr
305	•			•	310					315		•		-	320
	Cys	Glu	Ser	Gln	Lys	Phe	Gly	Glu	Leu	Val	Met	Thr	Lys	Glu	
	•			325	•		•		330				•	335	
Lys	Ala	Leu	Met	Gly	Leu	Tyr	His	Gly	Gln	Val	Leu	Cys	Lys	Lys	Asn
-			340	_		-		345				-	350	-	
Lys	Phe	Gly	Ala	Pro	Gln	Lys	Asp	Val	Lys	His	Leu	Ala	Ile	Leu	Gly
		355				-	360		_			365			_
Ala	Gly	Leu	Met	Gly	Ala	Gly	Ile	Ala	Gln	Val	Ser	Val	Asp	Lys	Gly
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Gln															
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				405					410	_		_		415	
			Phe	405	Lys Arg			Ile	410	_		_	Thr	415	
Leu	Thr	Ser	Phe 420	405 Glu	Arg	Asp	Ser	Ile 425	410 Phe	Ser	Asn	Leu	Thr 430	415 Gly	Gln
Leu	Thr	Ser Tyr	Phe 420	405 Glu		Asp	Ser Lys	Ile 425	410 Phe	Ser	Asn	Leu Ile	Thr 430	415 Gly	Gln
Leu Leu	Thr Asp	Ser Tyr 435	Phe 420 Gln	405 Glu Gly	Arg Phe	Asp Glu	Ser Lys 440	Ile 425 Ala	410 Phe Asp	Ser Met	Asn Val	Leu Ile 445	Thr 430 Glu	415 Gly Ala	Gln Val
Leu Leu	Thr Asp Glu	Ser Tyr 435	Phe 420 Gln	405 Glu Gly	Arg	Asp Glu Lys	Ser Lys 440	Ile 425 Ala	410 Phe Asp	Ser Met	Asn Val Lys	Leu Ile 445	Thr 430 Glu	415 Gly Ala	Gln Val
Leu Leu Phe	Thr Asp Glu 450	Ser Tyr 435 Asp	Phe 420 Gln Leu	405 Glu Gly Ser	Arg Phe Leu	Asp Glu Lys 455	Ser Lys 440 His	Ile 425 Ala Arg	410 Phe Asp Val	Ser Met Leu	Asn Val Lys 460	Leu Ile 445 Glu	Thr 430 Glu Val	415 Gly Ala Glu	Gln Val Ala
Leu Leu Phe Val	Thr Asp Glu 450	Ser Tyr 435 Asp	Phe 420 Gln Leu	405 Glu Gly Ser	Arg Phe Leu Cys	Asp Glu Lys 455	Ser Lys 440 His	Ile 425 Ala Arg	410 Phe Asp Val	Ser Met Leu Asn	Asn Val Lys 460	Leu Ile 445 Glu	Thr 430 Glu Val	415 Gly Ala Glu	Gln Val Ala Pro
Leu Leu Phe Val 465	Thr Asp Glu 450 Ile	Ser Tyr 435 Asp	Phe 420 Gln Leu Asp	405 Glu Gly Ser His	Arg Phe Leu Cys 470	Asp Glu Lys 455 Ile	Ser Lys 440 His	Ile 425 Ala Arg Ala	410 Phe Asp Val Ser	Ser Met Leu Asn 475	Asn Val Lys 460 Thr	Leu Ile 445 Glu Ser	Thr 430 Glu Val	415 Gly Ala Glu Leu	Gln Val Ala Pro 480
Leu Leu Phe Val 465	Thr Asp Glu 450 Ile	Ser Tyr 435 Asp	Phe 420 Gln Leu Asp	405 Glu Gly Ser His	Arg Phe Leu Cys	Asp Glu Lys 455 Ile	Ser Lys 440 His	Ile 425 Ala Arg Ala	410 Phe Asp Val Ser	Ser Met Leu Asn 475	Asn Val Lys 460 Thr	Leu Ile 445 Glu Ser	Thr 430 Glu Val	415 Gly Ala Glu Leu Ile	Gln Val Ala Pro 480
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Leu Phe Val 465 Ile	Thr Asp Glu 450 Ile Ser	Ser Tyr 435 Asp Pro Glu	Phe 420 Gln Leu Asp Ile Phe	405 Glu Gly Ser His Ala 485	Arg Phe Leu Cys 470	Asp Glu Lys 455 Ile Val	Ser Lys 440 His Phe Ser	Ile 425 Ala Arg Ala Lys	410 Phe Asp Val Ser Arg 490	Ser Met Leu Asn 475 Pro	Asn Val Lys 460 Thr	Leu Ile 445 Glu Ser Lys	Thr 430 Glu Val Ala Val Glu	415 Gly Ala Glu Leu Ile 495	Gln Val Ala Pro 480 Gly
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Leu Phe Val 465 Ile Met Thr Gly Phe 545 Ile	Thr Asp Glu 450 Ile Ser His Thr Leu 530 Tyr	Ser Tyr 435 Asp Pro Glu Tyr Glu 515 Lys Thr	Phe 420 Gln Leu Asp Ile Phe 500 Lys Gln Thr	405 Glu Gly Ser His Ala 485 Ser Thr Gly Arg	Arg Phe Leu Cys 470 Ala Pro Ser Lys Cys 550 Val	Asp Glu Lys 455 Ile Val Val Lys Val 535 Leu Asp	Ser Lys 440 His Phe Ser Asp Asp 520 Ile Ala Pro	Ile 425 Ala Arg Ala Lys 505 Thr Ile Pro	Asp Val Ser Arg 490 Met Ser Val Met Lys 570	Ser Met Leu Asn 475 Pro Gln Ala Val Met 555 Leu	Asn Val Lys 460 Thr Glu Leu Ser Lys 540 Ser Asp	Leu Ile 445 Glu Ser Lys Leu Ala 525 Asp Glu Ser	Thr 430 Glu Val Ala Val Glu 510 Val Gly Val Leu	415 Gly Ala Glu Leu Ile 495 Ile Ala Pro Ile Thr 575	Gln Val Ala Pro 480 Gly Ile Val Gly Arg 560 Thr
Leu Phe Val 465 Ile Met Thr Gly Phe 545 Ile	Thr Asp Glu 450 Ile Ser His Thr Leu 530 Tyr	Ser Tyr 435 Asp Pro Glu Tyr Glu 515 Lys Thr	Phe 420 Gln Leu Asp Ile Phe 500 Lys Gln Thr Glu Phe	405 Glu Gly Ser His Ala 485 Ser Thr Gly Arg	Arg Phe Leu Cys 470 Ala Pro Ser Lys Cys 550	Asp Glu Lys 455 Ile Val Val Lys Val 535 Leu Asp	Ser Lys 440 His Phe Ser Asp Asp 520 Ile Ala Pro	Ile 425 Ala Arg Ala Lys 505 Thr Ile Pro Lys Ala	Asp Val Ser Arg 490 Met Ser Val Met Lys 570	Ser Met Leu Asn 475 Pro Gln Ala Val Met 555 Leu	Asn Val Lys 460 Thr Glu Leu Ser Lys 540 Ser Asp	Leu Ile 445 Glu Ser Lys Leu Ala 525 Asp Glu Ser	Thr 430 Glu Val Ala Val Glu 510 Val Gly Val Leu Glu	415 Gly Ala Glu Leu Ile 495 Ile Ala Pro Ile Thr 575	Gln Val Ala Pro 480 Gly Ile Val Gly Arg 560 Thr
Leu Phe Val 465 Ile Met Thr Gly Phe 545 Ile Ser	Thr Asp Glu 450 Ile Ser His Thr Leu 530 Tyr Leu Phe	Ser Tyr 435 Asp Pro Glu Tyr Glu 515 Lys Thr Gln Gly	Phe 420 Gln Leu Asp Ile Phe 500 Lys Gln Thr Glu Phe 580	405 Glu Gly Ser His Ala 485 Ser Thr Gly Arg Gly 565 Pro	Arg Phe Leu Cys 470 Ala Pro Ser Lys Cys 550 Val Val	Asp Glu Lys 455 Ile Val Val Lys Val 535 Leu Asp	Ser Lys 440 His Phe Ser Asp Asp 520 Ile Ala Pro Ala	Ile 425 Ala Arg Ala Lys 505 Thr Ile Pro Lys Ala 585	A10 Phe Asp Val Ser Arg 490 Met Ser Val Met Lys 570 Thr	Ser Met Leu Asn 475 Pro Gln Ala Val Met 555 Leu Leu	Asn Val Lys 460 Thr Glu Leu Ser Lys 540 Ser Asp	Leu Ile 445 Glu Ser Lys Leu Ala 525 Asp Glu Ser Asp	Thr 430 Glu Val Ala Val Glu 510 Val Gly Val Leu Glu 590	415 Gly Ala Glu Leu Ile 495 Ile Ala Pro Ile Thr 575 Val	Gln Val Ala Pro 480 Gly Ile Val Gly Arg 560 Thr

600

595

605

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Glu Arg Phe Gly Gly Gly Asn Pro Glu Leu Leu Thr Gln Met Val Ser
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                                            620
Lys Gly Phe Leu Gly Arg Lys Ser Gly Lys Gly Phe Tyr Ile Tyr Gln
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Glu Gly Val Lys Arg Lys Asp Leu Asn Ser Asp Met Asp Ser Ile Leu
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                                    650
Ala Ser Leu Lys Leu Pro Pro Lys Ser Glu Val Ser Ser Asp Glu Asp
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Ile Gln Phe Arg Leu Val Thr Arg Phe Val Asn Glu Ala Val Met Cys
                            680
Leu Gln Glu Gly Ile Leu Ala Thr Pro Ala Glu Gly Asp Ile Gly Ala
                        695
                                            700
Val Phe Gly Leu Gly Phe Pro Pro Cys Leu Gly Gly Pro Phe Arg Phe
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                                        715
Val Asp Leu Tyr Gly Ala Gln Lys Ile Val Asp Arg Leu Lys Lys Tyr
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ccgccagcgt catcaaccag gccctgtcca tgcctgaggt cagcatcgcg cacaccaacg
780
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acacgccett ctctctct ctctctct ctctctct ctcccccgtc tnnccctccc
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 Ser Ala Leu Pro Gln Val Asn Thr Arg Arg Glu Ser Leu Asn Arg Gln
                              40
 Ala Pro Gln Pro Arg Arg Lys Pro Ser Phe Gln Thr Val Gly Ile Pro
                          55
                                              60
 Phe Ile Pro Trp His Arg Glu Pro Lys Gly Met Gln Thr Asp Pro Gly
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                                          75
 Arg Ala Leu His Ser Gln Thr Leu Ala Arg Thr Arg Arg Leu Gly Ala
                                      90
 Pro Arg Arg Ala Leu Pro Pro Arg Pro Pro Pro Pro Ala Asp Ser Pro
                                  105
 Leu Cys Glu Leu Asn His Leu Gly Ala Met Cys Arg Gly Arg Ala Ser
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cccgttgccc atccctgcgg ggctgcagcc atccctctcc acagcaagga tgacgtggaa
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120
cteegettee tggacatgag ccagaaccag tteeagtace tgccagaegg etteetgagg
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<210> 4436

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Leu Ser His Leu Asn Leu His Gln Asn Cys Leu Met Thr Leu His Ile
Arg Glu His Glu Pro Pro Gly Ala Leu Thr Glu Leu Asp Leu Ser His
                                    90
Asn Gln Leu Ser Glu Leu His Leu Ala Pro Gly Leu Ala Ser Cys Leu
                                105
Gly Ser Leu Arg Leu Phe Asn Leu Ser Ser Asn Gln Leu Leu Gly Val
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                                                125
Pro Pro Gly Leu Phe Ala Asn Ala Arg Asn Ile Thr Thr Leu Asp Met
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Ser His Asn Gln Ile
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cta
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Gln Gly Leu Glu His Pro Phe Val Val Asn Leu Trp Tyr Ser Phe Gln
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Asp Glu Glu Asp Met Phe Met Val Val Asp Leu Leu Leu Gly Gly Asp
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Leu Arg Tyr His Leu Gln Gln Asn Val His Phe Thr Glu Gly Thr Val
                                         60
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Lys Leu Tyr Ile Cys Glu Leu Ala Leu Ala Leu Glu Tyr Leu Gln Arg
                  70
                                     75
Tyr His Ile Ile His Arg Asp Ile Lys Pro Asp Asn Ile Leu Leu Asp
                                 90
Glu His Gly His Val His Ile Thr Asp Phe Asn Ile Ala Thr Val Val
                              105
                                                110
           100
Lys Gly Ala Glu Arg Ala Ser Ser Met Ala Gly Thr Lys Pro Tyr Met
                          120
Ala Pro Glu Val Phe Gln Val Tyr Met Asp Arg Gly Pro Gly Tyr Ser
                                         140
                     135
Tyr Pro Val Asp Trp Trp Ser Leu Gly Ile Thr Ala Tyr Glu Leu Leu
                           155
                  150
Arg Gly Trp Arg Pro Tyr Glu Ile His Ser Val Thr Pro Ile Asp Glu
                                 170
                                                    175
Ile Leu Asn Met Phe Lys Val Glu Arg Val His Tyr Ser Ser Thr Trp
                             185
Cys Lys Gly Met Val Ala Leu Leu Arg Lys Leu Leu Thr Lys Asp Pro
                                   205
                           200
Glu Ser Arg Val Ser Ser Leu His Asp Ile Gln Ser Val Pro Tyr Leu
                       215
Ala Asp Met Asn Trp Asp Ala Val Phe Lys Lys Ala Leu Met Pro Gly
225 230 235
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240
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Val Val Glu Leu Cys Gln Tyr Arg Val Ser Met Leu Lys Met Asp Glu
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Ser Thr Leu Leu Arg Glu Ala Gln Glu Leu Ser Leu Glu Lys Leu Gln
Gln Ala Val Arg Gln Asn Gly Leu Met Ser Gly Leu Met Gln Met Leu
                    70
                                        75
Leu Leu Lys Val Ser Ala His Ile Thr Glu Gln Leu Gly Met Ala Pro
Gly Glu Phe Arg Glu Ala Phe Lys Glu Ala Ser Lys Val Pro Phe
                                105
                                                    110
Cys Lys Phe His Leu Gly Asp Arg Pro Ile Pro Val Thr Phe Lys Arg
                            120
                                                125
Ala Ile Ala Ala Leu Ser Phe Trp Gln Lys Val Arg Leu Ala Trp Gly
                        135
                                            140
Leu Cys Phe Leu Ser Asp Pro Ile Ser Lys Asp Asp Val Glu Arg Cys
                    150
                                       155
Lys Gln Lys Asp Leu Leu Glu Gln Met Met Ala Glu Met Ile Gly Glu
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Ala Ser Glu Cys Ile Lys Lys Leu Cys Pro Val Tyr Phe His Ser Asn
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Gly Ser Glu Tyr Ile Met Ala Leu Thr Thr Gly Lys His Glu Gly Tyr
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Glu Tyr Ile Ala Gly Glu Tyr Thr Leu Leu Leu Leu Val Glu Ser Gly
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Tyr Gly Asn Ala Ser Lys Arg Phe Gln Val Val Ser Tyr Asn Thr Ala
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Ser Asp Asp Leu Glu Leu Leu Tyr His Ile Pro Glu Phe Ile Pro Glu
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Ala Arg Gly Leu Glu Phe Leu Met Ile Leu Gly Thr Glu Ser Tyr Thr
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Ser Thr Ala Met Ala Pro Lys Gly Ile Phe Cys Asn Pro Tyr Asn Asn
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Leu Ile Phe Ile Trp Gly Asn Phe Leu Leu Gln Arg Ser Gly Thr Ser
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Cys Glu Ala Ser Cys Lys Leu Asp Ser Leu Pro Ser Ala Pro Ser Pro
Lys Ala Gly Leu Gln Glu Val Arg Pro Ala Leu Gln Ala Thr Pro Val
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Leu Gly Leu Leu Ser Ser Ser Phe Leu Arg Val Thr Glu Pro Gly
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                                        75
Arg Glu Val Gly Cys Gly Leu Pro Cys Pro Tyr Ser His Leu Leu Gln
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Leu Pro Pro Cys Trp Thr His Gln Gln Gln Ser Lys
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Thr Pro Gly Leu Pro Ser Ser Ala Val Asn Asp Asp Leu Leu Leu
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Pro Ser Ser Leu Pro Ser Val Thr Lys Gly Leu Pro Arg Cys Gln Leu
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Trp Asn Glu Gly Cys Pro Trp Glu Val Met Ile Leu Arg Tyr Thr Gly
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Gln Pro Leu Ala Leu Pro Leu Cys Gly Arg Lys Pro Ala Gln Gly His
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Gln Ser Leu Val Ser Arg Leu Leu Ala Gln Gly Ser Glu Leu Gly Leu
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Glu Leu Val Phe Val Trp Asn Arg Asp Pro Gly Arg Met Ala Gly Ser
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                                       75
Val Pro Pro Ala Leu Gln Leu Glu Asp Leu Thr Thr Leu Glu Glu Arg
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His Pro Asp Leu Val Val Glu Val Ala His Pro Lys Ile Ile His Glu
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Ser Gly Val Gln Ile Leu Arg His Ala Asn Leu Leu Ser Leu Arg Val
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Thr Met Ala Thr His Pro Asp Gly Phe Arg Leu Glu Gly Pro Leu Ala
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Ala Ala His Ser Pro Gly Pro Cys Thr Val Leu Tyr Glu Gly Pro Val
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Arg Gly Leu Cys Pro Phe Ala Pro Arg Asn Ser Asn Thr Met Ala Ala
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Ala Ala Leu Ala Ala Pro Ser Leu Gly Phe Asp Gly Val Ile Gly Val
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Leu Val Ala Asp Thr Ser Leu Thr Asp Met His Val Val Asp Val Glu
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Leu Ser Gly Pro Arg Gly Pro Thr Gly Arg Ser Phe Ala Val His Thr
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Arg Arg Glu Asn Pro Ala Glu Pro Gly Ala Val Thr Gly Ser Ala Thr
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Asn Gly Met Ala Leu Lys Glu Glu Phe Glu Tyr Ile Ala Phe Arg Cys
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Ala Tyr Cys Phe Phe Leu Asn Pro Ala Arg Lys Thr Arg Pro Gln Ala
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Pro Arg Leu Pro Glu Phe Ser Phe Glu Lys Arg Gln Val Val Glu Gly
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Ser Ser Ser Val Gly Pro Leu Pro Ser Gly Ser Val Leu Ser Ser Asp
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Asn Gln Phe Asn Glu Glu Ser Leu Glu His Asp Val Leu Asp Asn Asn
Thr Glu Gln Thr Asp Asp Lys Ile Pro Ala Thr Glu Gln Thr Asn Gln
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Val Ile Glu Lys Ala Ser Asp Ser Glu Glu Pro Glu Glu Lys Gln Glu
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Thr Glu Asn Glu Glu Ala Ser Val Ile Glu Thr Asn Ser Thr Val Pro
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3639

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Glu Gly Glu Leu Trp His Ile Arg Ala Gln Ala Gly Leu Ser Val Val
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Ala Ile Met Ala Val Asp Ile Phe Phe His Phe Phe Tyr Ile Leu Thr
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Ile Pro Ser Asp Leu Lys Phe Ala Asn Arg Leu Pro Asp Ser Ala Leu
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Ala Gly Leu Ala Tyr Ser Asn Leu Val Tyr Asp Trp Val Lys Ala Ala
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Val Leu Phe Gly Val Val Asn Thr Val Ala Cys Leu Asp His Leu Asp
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Thr His Phe Asp Arg Gly Ile Asn Asp Trp Leu Cys Lys Tyr Val Tyr
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Asn His Ile Gly Gly Glu His Ser Ala Val Ile Pro Glu Leu Ala Ala
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Thr Val Ala Thr Phe Ala Ile Thr Thr Leu Trp Leu Gly Pro Cys Asp
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Ile Val Tyr Leu Trp Ser Phe Leu Asn Cys Phe Gly Leu Asn Phe Glu
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                             220
Leu Trp Met Gln Lys Leu Ala Glu Trp Gly Pro Leu Ala Arg Ile Glu
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Ala Ser Leu Ser Val Gln Met Ser Arg Arg Val Arg Ala Leu Phe Gly
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Ala Met Asn Phe Trp Ala Ile Ile Met Tyr Asn Leu Val Ser Leu Asn
                              265
                                      270
Ser Leu Lys Phe Thr Glu Leu Val Ala Arg Arg Leu Leu Leu Thr Gly
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Phe Pro Gln Thr Thr Leu Ser Ile Leu Phe Val Thr Tyr Cys Gly Val
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Gln Leu Val Lys Glu Arg Glu Arg Thr Leu Ala Leu Glu Glu Gln
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Lys Gln Asp Lys Glu Lys Pro Glu
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gcacatctat acccactctg gctctgaaag gcttgtcaac caaaaatggg cagctggggc

180

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Pro Gly Trp His Ile Tyr Thr His Ser Gly Ser Glu Arg Leu Val Asn
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Gln Lys Trp Ala Ala Gly Ala Lys Ala Tyr Leu Asn Lys Gly Ser Lys
                            40
Gly Pro Leu Ser Leu Gly Ser Ser Ile Gln Pro Leu Ser Gln Gln Arg
                        55
Gln Asp Cys Gly Pro Leu Cys Phe Leu Asn Arg Ala Gln Gly Ser Gln
                                        75
Gly Met Pro Ser Leu Gln His Ser Thr Leu Trp Ser Gln Trp Ser Arg
                                    90
                85
Arg Ser Ser Leu Lys Tyr Tyr Tyr Arg Gly Glu Arg Pro Ile Leu Ala
            100
                                105
 Met Leu Leu Tyr Leu Pro Arg Pro Lys Thr Val Leu Cys Ser Phe Ser
                            120
 Cys Ser Glu Ile Arg Ser Gln Asn Ser Arg Arg His Ser Phe Gly Lys
                                            140
                        135
 Lys Gly His Ala Phe Val Leu Tyr Leu Ile Leu Val Ser Glu Ala Leu
                                        155
                    150
 Ile Pro Val Asp Cys Gly Leu Arg Trp Ser Pro Pro Gln Asp Pro Gln
                                    170
                165
 Leu Gln Arg Gln Arg Met Lys Glu Glu Gln Pro Pro Gln Asp Leu
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Asn Leu Asp Glu Lys Asp Leu Lys Pro Leu Phe Glu Glu Phe Gly Lys
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Ile Tyr Glu Leu Thr Val Leu Lys Asp Arg Phe Thr Gly Met His Lys
                            40
Gly Cys Ala Phe Leu Thr Tyr Cys Glu Arg Glu Ser Ala Leu Lys Ala
                        55
Gln Ser Ala Leu His Glu Gln Lys Thr Leu Pro Gly Met Asn Arg Pro
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Ile Gln Val Lys Pro Ala Asp Ser Glu Ser Arg Gly Asp Ser Ser Cys
Leu Arg Gln Pro Pro Ser His Arg Lys Leu Phe Val Gly Met Leu Asn
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105
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Lys Gln Gln Ser Glu Asp Asp Val Arg Arg Leu Phe Glu Ala Phe Gly
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Asn Ile Glu Glu Cys Thr Ile Leu Arg Gly Pro Asp Gly Asn Ser Lys
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Gly Cys Ala Phe Val Lys Tyr Ser Ser His Ala Glu Ala Gln Ala Ala
                                        155
                    150
Ile Asn Ala Leu His Gly Ser Gln Thr Met Pro Gly Ala Ser Ser Ser
                                    170
                165
Leu Val Val Lys Phe Ala Asp Thr Asp Lys Glu Arg Thr Met Arg Arg
                                185
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Met Gln Gln Met Ala Gly Gln Met Gly Met Phe Asn Pro Met Ala Ile
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Pro Phe Gly Ala Tyr Gly Ala Tyr Ala Gln Ala Leu Met Gln Gln
                                            220
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Ala Ala Leu Met Ala Ser Val Ala Gln Gly Gly Tyr Leu Asn Pro Met
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Ala Ala Phe Ala Ala Ala Gln Met Gln Gln Met Ala Ala Leu Asn Met
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 780
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Lys Gly Gly Tyr Leu Met Leu Ser Phe Ile Asp Phe Cys Pro Phe Ser
                            40
Val Met Arg Leu Arg Ser Leu Pro Ser Pro Gln Arg Tyr Thr Arg Gln
                        55
                                            60
Glu Arg Tyr Arg Ala Arg Pro Pro Arg Val Leu Glu Arg Ser Gly Phe
                    70
                                        75
His Asn Glu Asn Ser Leu Ala Ile Tyr Gln Gly Leu Val Tyr Tyr Leu
                85
                                    90
Leu Trp Leu His Ser Val Tyr Asp Lys Asp Tyr Tyr Phe Phe Leu Ala
            100
                                105
Ser Asn Trp Arg Ser Ala Gly Gly Val Ser Ile Glu Met Asp Ser Tyr
                            120
                                                125
Glu Lys Ile Tyr Asn Leu Glu Ser Ala Tyr Glu Leu Pro Glu Arg Ile
                        135
Phe Leu Asp Lys Gly Thr Glu Tyr Ser Phe Ala Ile Phe Leu Ser Ala
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                                        155
Gln Gly His Ser Phe Arg Thr Gln Ser Glu Leu Gly Leu Arg Gly Thr
Arg Val Glu Pro Glu Gly Arg Gly Glu Gly Tyr Gln Asn Leu Gly Ala
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190
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Trp Gly Ala Gly Thr Pro Ser Glu Gly Arg Gly Leu Ser Val Asp Val
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Gly Val Val Leu Ala Asp Pro Gly Cys Ile Glu Ala Ser Val Lys Gln
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                                            220
Glu Val Leu Ile Asn Arg Asn Ser Val Leu Phe Ser Ile Thr Leu Lys
                    230
                                        235
Asp Lys Lys Leu Cys Tyr Asp Gln Gly Ile Ser Gly His His Leu Met
                                    250
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Glu Thr Ser Met Thr Val Asn Val Arg Ser Lys Pro Gly Gly Glu Gly
            260
                                265
Lys Arg Leu Ala Phe Asp Ile Thr Tyr Thr Leu Glu Tyr Ser Arg Leu
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                            280
Lys Asn Lys His Tyr Phe Asp Cys Val Asn Val Asn Pro Glu Met Pro
                                            300
                        295
Cys Phe Leu Phe Arg Asp Ser Val Tyr Val Leu Leu Val Val Gly Gly
                    310
Gly Pro Thr Leu Asp Ser Leu Lys Asp Tyr Ser Glu Asp Glu Ile Tyr
                                    330
                325
Arg Phe Asn Ser Pro Leu Asp Lys Thr Asn Ser Leu Ile Trp Thr Thr
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Arg Thr Thr Arg Thr Thr Lys Asp Ser Ala Phe His Ile Met Ser His
                                                 365
                            360
Glu Ser Pro Gly Ile Glu Trp Leu Cys Leu Glu Asn Ala Pro Cys Tyr
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                                             380
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Gly Lys Glu Arg Ala Ala Pro Ser Gln Gly Ser Pro Arg Cys Cys Pro
                            40
                                                45
Leu Ser Pro Gly Ser Ala Arg Gly Ala Arg Gly Glu Asn Gln Pro Arg
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Ser Arg Gly Arg Ala Ala Asn Gly Arg Ala Pro Pro Gly Pro Leu Thr
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Arg Arg Leu Ala Gly Arg Ala Arg Thr Pro Arg Pro Lys Trp Leu Phe
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                                                         95
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Gly Leu Val Lys Arg Val Arg Asp Val
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120
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240
tototgocca cocccaaaco coaggggoco ototttocco ogtoacagta aaggagocaa
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Ser Ser Asn Lys Glu Asn Phe Ile Tyr Leu Ala Asp Phe Pro Lys Glu
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Leu Ser Ile Lys Tyr Met Ala Arg Ser Phe Arg Gly Ala Val Ala Ile
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Val Thr Glu Thr Glu Glu Val Gly Cys Pro Ala Leu Leu Pro Ile Pro
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Ser Leu Pro Thr Pro Lys Pro Gln Gly Pro Leu Phe Pro Pro Ser Gln
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	tctacatccc	cccacccatc	ttctcccggc	tggacgcccc	ggtggactac
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1800					ggacttcaag
1860					gtgacagggc
1920					ggagccgggg
1980					ggagagctag
agtcccagca 2040	aagggtgcag	ctgaccctag	cactggctgt	gacatgetge	ttggtgctgc

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 Val Ser Arg Ile Tyr Ala Asp Pro Thr Lys Arg Leu Glu Leu Tyr Phe
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 Arg Pro Lys Asp Pro Tyr Cys His Pro Val Cys Ala Asn Arg Phe Ser
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 Thr Ser Ser Leu Leu Leu Arg Ile Arg Lys Arg Thr Arg Arg Gln Lys
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 Gly Val Leu Gly Thr Glu Ala His Ser Glu Val Thr Phe Asp Met Glu
                                 105
             100
 Ile Leu Gly Ile Ile Ser Thr Ile Tyr Lys Phe Gln Gly Met Ser Asp
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                             120
 Phe Gln Tyr Leu Ala Val His Thr Glu Ala Gly Gly Lys His Thr Ser
                                             140
                         135
 Met Tyr Asp Lys Val Leu Met Leu Arg Pro Glu Lys Glu Ala Phe Phe
                                         155
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 His Gln Glu Leu Pro Leu Tyr Ile Pro Pro Pro Ile Phe Ser Arg Leu
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                 165
 Asp Ala Pro Val Asp Tyr Phe Tyr Arg Pro Glu Thr Gln His Arg Glu
                                  185
 Gly Tyr Asn Asn Pro Pro Ile Ser Gly Glu Asn Leu Ile Gly Leu Ser
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Arg Ala Arg Arg Pro His Asn Ala Ile Phe Val Asn Phe Glu Asp Glu
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Glu Val Pro Lys Gln Pro Leu Glu Ala Ala Ala Gln Thr Trp Arg Arg
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Val Cys Thr Asn Pro Val Asp Arg Lys Val Glu Glu Leu Arg Lys
                                   250
Leu Phe Asp Ile Arg Pro Ile Trp Ser Arg Asn Ala Val Lys Ala Asn
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                                                   270
Ile Ser Val His Pro Asp Lys Leu Lys Val Leu Leu Pro Phe Ile Ala
                            280
Tyr Tyr Met Ile Thr Gly Pro Trp Arg Ser Leu Trp Ile Arg Phe Gly
                       295
                                            300
Tyr Asp Pro Arg Lys Asn Pro Asp Ala Lys Ile Tyr Gln Val Leu Asp
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                                       315
Phe Arg Ile Arg Cys Gly Met Lys His Gly Tyr Ala Pro Ser Asp Leu
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                                   330
Pro Val Lys Ala Lys Arg Ser Thr Tyr Asn Tyr Ser Leu Pro Ile Thr
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Val Lys Lys Thr Ser Ser Gln Leu Val Thr Met His Asp Leu Lys Gln
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Gly Leu Gly Arg Ser Gly Thr Ser Gly Ala Arg Lys Pro Ala Ser Ser
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Lys Tyr Lys Leu Lys Asp Ser Val Tyr Ile Phe Arg Glu Gly Ala Leu
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Pro Pro Tyr Arg Gln Met Phe Tyr Gln Leu Cys Asp Leu Asn Val Glu
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Glu Leu Gln Lys Ile Ile His Arg Asn Asp Gly Ala Glu Asn Ser Cys
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Thr Glu Arg Asp Gly Trp Cys Leu Pro Lys Thr Ser Asp Glu Leu Arg
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Asp Thr Met Ser Leu Met Ile Arg Gln Thr Ile Arg Ser Lys Arg Pro
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Ala Leu Phe Ser Ser Ser Ala Lys Ala Asp Gly Gly Lys Glu Gln Leu
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Thr Tyr Glu Ser Gly Glu Asp Glu Glu Glu Glu Glu Glu Glu Glu
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 Thr Leu Ala Pro Tyr Tyr Leu Arg Ala Pro Ser Val Ala Leu Pro Val
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 Ala Gln Val Pro Thr Asp Pro Gly His Phe Ser Val Leu Leu Asp Val
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 Lys His Phe Ser Pro Glu Glu Ile Ala Val Lys Val Val Gly Glu His
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 Val Ala Arg Glu Phe His Arg Arg Tyr Arg Leu Pro Pro Gly Val Asp
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Glu Thr Val Val Thr Gly Ser Leu Asp Asp Leu Val Lys Val Trp Lys
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Lys Gln Met Lys Ser Ile Asp Ala Gly Pro Val Asp Ala Trp Thr Leu
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Ala Phe Ser Pro Asp Ser Gln His Leu Ala Thr Gly Thr His Met Gly
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Lys Tyr Leu Ala Ser Gly Ala Ile Asp Gly Ile Ile Asn Ile Phe Asp
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Ser Asp Asp Gly Tyr Ile Lys Ile Tyr Asp Val Gln His Ala Asn Leu
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Ala Gly Thr Leu Ser Gly His Ala Ser Trp Val Leu Asn Val Ala Phe
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Cys Pro Asp Asp Thr His Phe Val Ser Ser Ser Ser Asp Lys Ser Val
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Gly His Thr Glu Gly Ser Val Ala Leu His Gly Ser Pro Ala Ser Arg
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Gln Thr Ser Gln Arg Trp Thr Val Cys Gln Gly Trp Asp Trp Asn Ser
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Ser Arg Thr Pro Asp Phe Trp Gly Val Pro Asp Ser Arg Gly Gly Pro
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Arg Ala Gly Leu Gly His Val Gln Ser Leu Ile Asp Leu Cys Pro Phe
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Cys	Ser	Cys	100	AIA	FIO	FILE	361	105	ASII	<b>1</b> 173	Cys	02	110	•	J
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		Arq	Ile	asp			Lys	Leu	Lvs			Asn	Ser		
		_		144	_		•		145	_				145	_
Gly	Glu	Ala	Gln	Lys	Leu	Leu	Glu	Leu	Lys	Met	Glu	Ala	Glu	Lys	Ile
			146					146					1470	-	
Thr	Arg			Ser	Lys	Asn	Ser		Ala	Asp	Leu			Pro	Glu
<b>5</b>	<b>a</b>	147	_	_	_	_	1486		_	_	_	148		_	
Pro			Pro	Leu	ser		Thr	Arg	Arg	Arg			Arg	Ser	Val
Ture	1490		Mot	C111	λαπ	149	Glu	Nan	7. ~~	C 0 ~	1500		T	~1	Desa
1509		1111	1456	GIY	1510		GIU.			151		val	ьуѕ	Giu	1520
		Gln	Pro	Ara			Arg					Ara	Glu	T.e.n	
				152					1530			9	014	1539	
Glu	Ala	Ala	Ala	Val	Pro	Thr	Thr	Pro	Arg	Arg	Gly	Arq	Pro		
			1540					1549		_	•	. •	1550		-
Thr	Arg	Arg 155		Ala	Asp	Glu	Glu 1560		Glu	Asn	Glu	Ala 1569		Glu	Pro
Ala	Glu 1570		Leu	Lys	Pro	Pro 1579	Glu 5	Gly	Trp	Arg	Ser 1580		Arg	Ser	Gln
Lys	Thr	Ala	Ala	Gly	Gly	Gly	Pro	Gln	Glv	Lvs			Lvs	Asn	Glu
1585				•	1590				•		5		•	-	1600
Pro	Lys	Val	Asp	Ala 160		Arg	Pro	Glu	Ala 1610		Thr	Glu	Val	Gly 1619	
Gln	Ile	Gly	Val	Lys	Glu	Ser	Ser	Met	Glu	Pro	Lys	Ala	Ala	Glu	Glu
			1620					162					1630		
Glu	Ala			Glu	Gln	Lys	Arg		Arg	Lys	Asp		-	Thr	Asp
		1639					1640			· .	<b>.</b>	1645			
Lys			Pro	Glu	Thr		Pro	Val	Glu	Val			Lys	Lys	Pro
λ] -	1650		Lvc	) cp	Co~	1659	Ser	T	7 ~~	C1	1660		3	<b>3</b>	0
1665		GIU	Lys	MSII	1670		261	БХЭ	Arg	1679		ser	Arg	ASII	1680
		Ala	Val	Asp			Ala	Ser	Leu			Va 1	Asn	Δla	
3				1685					1690			• • • •	пор	1695	
Val	Ser	Pro	Arg 1700	Gly		Ala	Ala	Gln 170	Ala		Glu	Arg	Glu 1710	Ser	
Val	Val	Ala 1719	Val		Pro	Glu	Lys 1720	Ser		Ser	Pro	Gln 1725	Lys		Asp
Gly	Leu 1730	Ser		Gln	Leu	Lys 1739	Ser		Pro	Val		Pro		Lys	Glu
Dro			Glu	) en	Val		Ala	·Ca~	C1	Dro	1740		C1	71-	The
1745		цуз	GIU	тэр	1750		AIA	Ser	GIY	1755		PIO	GIU	Ald	1760
		Ala	Lvs	Gln			Leu	G) 11	G) n			G] 11	His	Tle	
			2-	1769					1770				0	1775	
Lys	Leu	Ala	Glu			Ala	Ser	Ala			Lys	Ala	Asp		
-			1780					1785		•	-		1790		
Glu	Gly	Leu	Ala	Pro	Glu	Asp	Arq	Asp	Lvs	Pro	Ala	His	Gln	Ala	Ser

			1800			1805			
1795		71- 71-		Cox	rla Tla			Tle	Ser
Glu Thr Glu	ren via			ser	182		waħ	110	Jei
1810		1815		n			~1	C1.,	Cor
Gly Glu Pro	Glu Asn		Ala Pro			PIO	GIY	GIU	1840
1825		1830			1835	<b>.</b>	<b>-</b> 1 -	D	
Gln Thr Asp			Ala Gly			Leu			
	184			1850		_		1855	
Glu Glu Gly	Met Glu	Thr Asp			Ser Gly				Thr
•	1860		186				1870		
Glu Ala Ala	Thr Glu	Ser Ser	Arg Pro	Pro '	Val Asn	Ala	Pro	Asp	Pro
1879			1880			1885			
Ser Ala Gly	Pro Thr	Asp Thr	Lys Glu	Ala	Arg Gly	Asn	Ser	Ser	Glu
1890			5		- 190				
Thr Ser His	Ser Val			Glv	Ser Lys	Glu	Val	Glu	Val
1905		1910	•		1915				1920
Thr Leu Val	Arg Lvs		Glv Arc	Gln	Lvs Thr	Thr	Arg	Ser	Árg
III bea var	192		0.75	1930			3	1935	
Arg Lys Arg			Tive Val			Val	Glu		
Arg bys Arg		MSII LYS	194		AIG FIO		1950		
	1940	G1 31-			Cor Dro				Glu
Val Pro Glu		GIN AIA			ser Pro			ASII	GIU
195!		:	1960		a1 a1	1965		dia	
Gly Thr Thr	Val Gln			Pro			гÀг	GIN	ser
1970		197			198	_	_	_	_
Glu Lys Pro	His Ser		Pro Glr			Ser	Asp	Leu	
1985		1990			1995				2000
Lys Ile Pro	Ser Thr	Glu Asn	Ser Ser	Gln	Glu Ile	Ser	Val	Glu	Glu
	200			2010				2019	
Arg Thr Pro	Thr Lys	Ala Ser	Val Pro	Pro	Asp Leu	Pro	Pro	Pro	Pro
	2020		202				2030		
Gln Pro Ala							_	17-1	77.5 m
	Pro Val	Asp Glu	Glu Pro	Gln	Ala Arg	Phe	Arg	vai	HIS
203		Asp Glu	Glu Pro 2040	Gln	Ala Arg	Phe 2045		vai	HIS
. 203	5		2040			2045	i		
203 Ser Ile Ile	5		2040 Val Thi			2045 Asp	i		
203 Ser Ile Ile 2050	5 Glu Ser	Asp Pro	2040 Val Thi 5	Pro	Pro Ser 206	2045 Asp 0	Pro	Ser	Ile
203 Ser Ile Ile 2050 Pro Ile Pro	5 Glu Ser	Asp Pro 2059 Pro Ser	2040 Val Thi 5	Pro	Pro Ser 206 Ala Lys	2045 Asp 0	Pro	Ser	Ile
203 Ser Ile Ile 2050 Pro Ile Pro 2065	5 Glu Ser Thr Leu	Asp Pro 205: Pro Ser 2070	2040 Val Thi 5 Val Thi	Pro Ala	Pro Ser 206 Ala Lys 2075	2045 Asp 0 Leu	Pro Ser	Ser Pro	Ile Pro 2080
203 Ser Ile Ile 2050 Pro Ile Pro	Glu Ser Thr Leu Gly Gly	Asp Pro 205 Pro Ser 2070 Ile Pro	2040 Val Thi 5 Val Thi	Pro Ala Ser	Pro Ser 206 Ala Lys 2075 Pro Pro	2045 Asp 0 Leu	Pro Ser	Ser Pro Val	Ile Pro 2080 Thr
203 Ser Ile Ile 2050 Pro Ile Pro 2065 Val Ala Ser	Glu Ser Thr Leu Gly Gly 208	Asp Pro 205 Pro Ser 2070 Ile Pro	2040 Val Thi 5 Val Thi His Gli	Pro Ala Ser 2090	Pro Ser 206 Ala Lys 2075 Pro Pro	2045 Asp 0 Leu Thr	Pro Ser Lys	Ser Pro Val 209	Ile Pro 2080 Thr
203 Ser Ile Ile 2050 Pro Ile Pro 2065	Glu Ser Thr Leu Gly Gly 208 Thr Arg	Asp Pro 205 Pro Ser 2070 Ile Pro	2040 Val Thi 5 Val Thi His Gli	Pro Ala Ser 2090	Pro Ser 206 Ala Lys 2075 Pro Pro	2045 Asp 0 Leu Thr	Pro Ser Lys Thr	Ser Pro Val 2099 Pro	Ile Pro 2080 Thr
203 Ser Ile Ile 2050 Pro Ile Pro 2065 Val Ala Ser Glu Trp Ile	Glu Ser Thr Leu Gly Gly 208 Thr Arg 2100	Asp Pro 205 Pro Ser 2070 Ile Pro 5 Gln Glu	2040 Val Thi 5 Val Thi His Gli Glu Pro	Pro Ala Ser 2090 Arg	Pro Ser 206 Ala Lys 2075 Pro Pro	2045 Asp 0 Leu Thr	Pro Ser Lys Thr 2110	Ser Pro Val 209! Pro	Pro 2080 Thr Ser
203 Ser Ile Ile 2050 Pro Ile Pro 2065 Val Ala Ser Glu Trp Ile Pro Ala Leu	Glu Ser Thr Leu Gly Gly 208 Thr Arg 2100 Pro Pro	Asp Pro 205 Pro Ser 2070 Ile Pro 5 Gln Glu	2040 Val Thi  Val Thi  His Gli  Glu Pro 210 Lys Ala	Pro Ala Ser 2090 Arg	Pro Ser 206 Ala Lys 2075 Pro Pro	2045 Asp 0 Leu Thr Ser Asp	Pro Ser Lys Thr 2110	Ser Pro Val 209! Pro	Pro 2080 Thr Ser
203 Ser Ile Ile 2050 Pro Ile Pro 2065 Val Ala Ser Glu Trp Ile Pro Ala Leu 211	Glu Ser Thr Leu Gly Gly 208 Thr Arg 2100 Pro Pro	Asp Pro 2055 Pro Ser 2070 Ile Pro 5 Gln Glu Asp Thr	2040 Val Thr  Val Thr  His Glr  Glu Pro  210  Lys Ala  2120	Pro Ala Ser 2090 Arg S5 A Ser	Pro Ser 206 Ala Lys 2075 Pro Pro Ala Gln Asp Val	2045 Asp 0 Leu Thr Ser Asp 2125	Pro Ser Lys Thr 2110	Pro Val 2099 Pro Ser	Pro 2080 Thr Ser
203 Ser Ile Ile 2050 Pro Ile Pro 2065 Val Ala Ser Glu Trp Ile Pro Ala Leu 211 Ser Thr Leu	Glu Ser Thr Leu Gly Gly 208 Thr Arg 2100 Pro Pro	Asp Pro 205: Pro Ser 2070 Ile Pro 5 Gln Glu Asp Thr	2040 Val Thr  Val Thr  His Glr  Glu Pro 210 Lys Ala 2120 Met Asp	Pro Ala Ser 2090 Arg S5 A Ser	Pro Ser 206 Ala Lys 2075 Pro Pro Ala Gln Asp Val	2045 Asp 0 Leu Thr Ser Asp 2125	Pro Ser Lys Thr 2110	Pro Val 2099 Pro Ser	Pro 2080 Thr Ser
203 Ser Ile Ile 2050 Pro Ile Pro 2065 Val Ala Ser Glu Trp Ile Pro Ala Leu 211 Ser Thr Leu 2130	Glu Ser Thr Leu Gly Gly 208 Thr Arg 2100 Pro Pro Arg Lys	Asp Pro 2050 Pro Ser 2070 Ile Pro 5 Gln Glu Asp Thr Ile Leu 213	2040 Val Thr  Val Thr  His Glr  Glu Pro 210 Lys Ala 2120 Met Asp	Pro Ala Ser 2090 Arg S Ser Pro	Pro Ser 206 Ala Lys 2075 Pro Pro Ala Gln Asp Val Lys Tyr 214	2045 Asp 0 Leu Thr Ser Asp 2125 Val	Pro Ser Lys Thr 2110 Thr	Ser Pro Val 2099 Pro Ser	Pro 2080 Thr 5 Ser Ser
203 Ser Ile Ile 2050 Pro Ile Pro 2065 Val Ala Ser Glu Trp Ile Pro Ala Leu 211 Ser Thr Leu	Glu Ser Thr Leu Gly Gly 208 Thr Arg 2100 Pro Pro Arg Lys	Asp Pro 2050 Pro Ser 2070 Ile Pro 5 Gln Glu Asp Thr Ile Leu 213	2040 Val Thr  Val Thr  His Glr  Glu Pro 210 Lys Ala 2120 Met Asp	Pro Ala Ser 2090 Arg S Ser Pro	Pro Ser 206 Ala Lys 2075 Pro Pro Ala Gln Asp Val Lys Tyr 214 Ile Ala	2045 Asp 0 Leu Thr Ser Asp 2125 Val	Pro Ser Lys Thr 2110 Thr	Ser Pro Val 2099 Pro Ser	Pro 2080 Thr Ser Thr
203 Ser Ile Ile 2050 Pro Ile Pro 2065 Val Ala Ser Glu Trp Ile Pro Ala Leu 211 Ser Thr Leu 2130 Ser Val Thr	Glu Ser Thr Leu Gly Gly 208 Thr Arg 2100 Pro Pro 5 Arg Lys	Asp Pro 205 Pro Ser 2070 Ile Pro 5 Gln Glu Asp Thr Ile Leu 213 Ser Val 2150	2040 Val Thi S Val Thi His Gli Glu Pro 210 Lys Ala 2120 Met Asp 5 Thr Thi	Pro Ala Ser 2090 Arg S S A Ser Pro	Pro Ser 206 Ala Lys 2075 Pro Pro Ala Gln Asp Val Lys Tyr 214 Ile Ala 2155	2045 Asp 0 Leu Thr Ser Asp 2125 Val 0 Glu	Pro Ser Lys Thr 2110 Thr Ser	Ser Pro Val 2099 Pro Ser Ala Val	Pro 2080 Thr Ser Ser Ser 2160
Ser Ile Ile 2050 Pro Ile Pro 2065 Val Ala Ser Glu Trp Ile Pro Ala Leu 211 Ser Thr Leu 2130 Ser Val Thr	Glu Ser Thr Leu Gly Gly 208 Thr Arg 2100 Pro Pro 5 Arg Lys	Asp Pro 205 Pro Ser 2070 Ile Pro 5 Gln Glu Asp Thr Ile Leu 213 Ser Val 2150	2040 Val Thi S Val Thi His Gli Glu Pro 210 Lys Ala 2120 Met Asp 5 Thr Thi	Pro Ala Ser 2090 Arg S S A Ser Pro	Pro Ser 206 Ala Lys 2075 Pro Pro Ala Gln Asp Val Lys Tyr 214 Ile Ala 2155	2045 Asp 0 Leu Thr Ser Asp 2125 Val 0 Glu	Pro Ser Lys Thr 2110 Thr Ser	Ser Pro Val 2099 Pro Ser Ala Val	Pro 2080 Thr Ser Ser Ser 2160
203 Ser Ile Ile 2050 Pro Ile Pro 2065 Val Ala Ser Glu Trp Ile Pro Ala Leu 211 Ser Thr Leu 2130 Ser Val Thr 2145 Ala Ala Pro 2165	Glu Ser Thr Leu Gly Gly 208 Thr Arg 2100 Pro Pro S Arg Lys	Asp Pro 205 Pro Ser 2070 Ile Pro 5 Gln Glu Asp Thr Ile Leu 213 Ser Val 2150 His Glu 2170	2040 Val Thi S Val Thi His Glu Glu Pro 210 Lys Ala 2120 Met Asp 5 Thr Thi	Pro Ala Ser 2090 Arg Ss A Ser Pro Ala	Pro Ser 206 Ala Lys 2075 Pro Pro Ala Gln Asp Val Lys Tyr 214 Ile Ala 2155 Pro Pro 2175	2045 Asp 0 Leu Thr Ser Asp 2125 Val 0 Glu	Pro Ser Lys Thr 2110 Thr Ser Pro	Ser  Pro  Val 2099 Pro  Ser  Ala  Val  Ser	Pro 2080 Thr Ser Thr Ser 2160 Lys
203 Ser Ile Ile 2050 Pro Ile Pro 2065 Val Ala Ser Glu Trp Ile Pro Ala Leu 211 Ser Thr Leu 2130 Ser Val Thr 2145 Ala Ala Pro	Glu Ser Thr Leu Gly Gly 208 Thr Arg 2100 Pro Pro S Arg Lys	Asp Pro 205 Pro Ser 2070 Ile Pro 5 Gln Glu Asp Thr Ile Leu 213 Ser Val 2150 His Glu 2170	2040 Val Thi S Val Thi His Glu Glu Pro 210 Lys Ala 2120 Met Asp 5 Thr Thi	Pro Ala Ser 2090 Arg Ss A Ser Pro Ala	Pro Ser 206 Ala Lys 2075 Pro Pro Ala Gln Asp Val Lys Tyr 214 Ile Ala 2155 Pro Pro 2175	2045 Asp 0 Leu Thr Ser Asp 2125 Val 0 Glu	Pro Ser Lys Thr 2110 Thr Ser Pro	Ser  Pro  Val 2099 Pro  Ser  Ala  Val  Ser	Pro 2080 Thr Ser Thr Ser 2160 Lys
203 Ser Ile Ile 2050 Pro Ile Pro 2065 Val Ala Ser Glu Trp Ile Pro Ala Leu 211 Ser Thr Leu 2130 Ser Val Thr 2145 Ala Ala Pro 2165	Glu Ser Thr Leu Gly Gly 208 Thr Arg 2100 Pro Pro S Arg Lys	Asp Pro 205 Pro Ser 2070 Ile Pro 5 Gln Glu Asp Thr Ile Leu 213 Ser Val 2150 His Glu 2170	2040 Val Thi S Val Thi His Glu Glu Pro 210 Lys Ala 2120 Met Asp 5 Thr Thi	Pro Ala Ser 2090 Arg Ser Pro Ala Pro	Pro Ser 206 Ala Lys 2075 Pro Pro Ala Gln Asp Val Lys Tyr 214 Ile Ala 2155 Pro Pro 2175	2045 Asp 0 Leu Thr Ser Asp 2125 Val 0 Glu	Pro Ser Lys Thr 2110 Thr Ser Pro	Ser Pro Val 2099 Pro Ser Ala Val Ser Ser	Pro 2080 Thr Ser Thr Ser 2160 Lys
203 Ser Ile Ile 2050 Pro Ile Pro 2065 Val Ala Ser Glu Trp Ile Pro Ala Leu 211 Ser Thr Leu 2130 Ser Val Thr 2145 Ala Ala Pro 2165 Lys Pro Leu	Glu Ser Thr Leu Gly Gly 208 Thr Arg 2100 Pro Pro S Arg Lys Ser Thr Cys Leu Glu Glu 2180	Asp Pro 205 Pro Ser 2070 Ile Pro 5 Gln Glu Asp Thr Ile Leu 213 Ser Val 2150 His Glu 2170 Lys Thr	2040 Val Thi S Val Thi His Gli Glu Pro 210 Lys Ala 2120 Met Asp 5 Thr Thi Ala Pro 21a	Pro Ala Ser 2090 Arg Sser Pro Ala Pro Pro	Pro Ser 206 Ala Lys 2075 Pro Pro Ala Gln Asp Val Lys Tyr 214 Ile Ala 2155 Pro Pro 2175 Val Thr	2045 Asp 0 Leu Thr Ser Asp 2125 Val 0 Glu Val	Pro Ser Lys Thr 2110 Thr Ser Pro Asp Asn 2190	Ser Pro Val 2099 Pro Ser Ala Val Ser Ser	Pro 2080 Thr Ser Ser Thr Ser 2160 Lys
203 Ser Ile Ile 2050 Pro Ile Pro 2065 Val Ala Ser Glu Trp Ile Pro Ala Leu 211 Ser Thr Leu 2130 Ser Val Thr 2145 Ala Ala Pro 2165	Glu Ser Thr Leu Gly Gly 208 Thr Arg 2100 Pro Pro S Arg Lys Ser Thr Cys Leu Glu Glu 2180 Ser Glu	Asp Pro 205 Pro Ser 2070 Ile Pro 5 Gln Glu Asp Thr Ile Leu 213 Ser Val 2150 His Glu 2170 Lys Thr	2040 Val Thi S Val Thi His Gli Glu Pro 210 Lys Ala 2120 Met Asp 5 Thr Thi Ala Pro 21a	Pro Ala Ser 2090 Arg Sser Pro Ala Pro Pro	Pro Ser 206 Ala Lys 2075 Pro Pro Ala Gln Asp Val Lys Tyr 214 Ile Ala 2155 Pro Pro 2175 Val Thr	2045 Asp 0 Leu Thr Ser Asp 2125 Val 0 Glu Val	Pro Ser Lys Thr 2110 Thr Ser Pro Asp Asn 2190 Lys	Ser Pro Val 2099 Pro Ser Ala Val Ser Ser	Pro 2080 Thr Ser Ser Thr Ser 2160 Lys
Ser Ile Ile 2050 Pro Ile Pro 2065 Val Ala Ser Glu Trp Ile Pro Ala Leu 211 Ser Thr Leu 2130 Ser Val Thr 2145 Ala Ala Pro 2165 Lys Pro Leu Ile Gln Ala 219	Glu Ser Thr Leu Gly Gly 208 Thr Arg 2100 Pro Pro S Arg Lys Ser Thr Cys Leu Glu Glu 2180 Ser Glu 5	Asp Pro 205: Pro Ser 2070 Ile Pro 5 Gln Glu Asp Thr Ile Leu 213 Ser Val 2150 His Glu 2170 Lys Thr	2040 Val Thi S Val Thi His Gli Glu Pro 210 Lys Ala 2120 Met Asi 5 Thr Thi Ala Pro 210 Val Ala 2200	Pro Ala Ser 2090 Arg Ser Pro Ala Pro Pro Ala Ala	Pro Ser 206 Ala Lys 2075 Pro Pro Ala Gln Asp Val Lys Tyr 214 Ile Ala 2155 Pro Pro 2175 Val Thr	2045 Asp 0 Leu Thr Ser Asp 2125 Val 0 Glu Val Asn Glu 2205	Pro Ser Lys Thr 2110 Thr Ser Pro Asp Asn 2190 Lys	Ser Pro Val 2099 Pro Ser Ala Val Ser Ser Val	Pro 2080 Thr Ser Ser Thr Ser 2160 Lys Glu Ala
203 Ser Ile Ile 2050 Pro Ile Pro 2065 Val Ala Ser Glu Trp Ile Pro Ala Leu 211 Ser Thr Leu 2130 Ser Val Thr 2145 Ala Ala Pro 2165 Lys Pro Leu Ile Gln Ala 219 Pro Val Ile	Glu Ser Thr Leu Gly Gly 208 Thr Arg 2100 Pro Pro S Arg Lys Ser Thr Cys Leu Glu Glu 2180 Ser Glu 5	Asp Pro 205 Pro Ser 2070 Ile Pro 5 Gln Glu Asp Thr Ile Leu 213 Ser Val 2150 His Glu 2170 Lys Thr Val Leu Lys Ile	2040 Val Thi Solution His Glu Glu Pro 210 Lys Ala 2120 Met Asp 5 Thr Thi Ala Pro 21: Val Ala 2200 Thr Se:	Pro Ala Ser 2090 Arg Ser Pro Ala Pro Pro Ala Ala	Pro Ser 206 Ala Lys 2075 Pro Pro Ala Gln Asp Val Lys Tyr 214 Ile Ala 2155 Pro Pro 2175 Val Thr	2045 Asp 0 Leu Thr Ser Asp 2125 Val 0 Glu Val Asn Glu 2205	Pro Ser Lys Thr 2110 Thr Ser Pro Asp Asn 2190 Lys	Ser Pro Val 2099 Pro Ser Ala Val Ser Ser Val	Pro 2080 Thr Ser Ser Thr Ser 2160 Lys Glu Ala
Ser Ile Ile 2050 Pro Ile Pro 2065 Val Ala Ser Glu Trp Ile Pro Ala Leu 211 Ser Thr Leu 2130 Ser Val Thr 2145 Ala Ala Pro 2165 Lys Pro Leu Ile Gln Ala 219	Glu Ser Thr Leu Gly Gly 208 Thr Arg 2100 Pro Pro S Arg Lys Ser Thr Cys Leu 2180 Ser Glu 5 Ala Pro	Asp Pro 205: Pro Ser 2070 Ile Pro 5 Gln Glu Asp Thr Ile Leu 213 Ser Val 2150 His Glu 2170 Lys Thr Val Leu Lys Ile	2040 Val Thi S Val Thi His Gli Glu Pro 210 Lys Ala 2120 Met Asi Thr Thi Ala Pro Ala Pro 216 Val Ala 2200 Thr Se:	Pro Ala Ser 2090 Arg Ser Pro Ala Pro Pro Ala Pro Ala Pro	Pro Ser 206 Ala Lys 2075 Pro Pro Ala Gln Asp Val Lys Tyr 214 Ile Ala 2155 Pro Pro 2175 Val Thr Asp Lys Ile Ser 222	2045 Asp 0 Leu Thr Ser Asp 2125 Val 0 Glu Val Asn Glu 2205 Arg	Pro Ser Lys Thr 2110 Thr Ser Pro Asp Asn 2190 Lys Met	Ser Pro Val 2099 Pro Ser Ala Val Ser Ser Val Pro	Pro 2080 Thr Ser Ser Thr Ser 2160 Lys Glu Ala Val

222					223					223					2240
				224	5				225	0		_		225	
Val	Ser	Leu	Val 226		Val -	Asn	Ala	Leu 226		Gly	Pro	Val	Lys 227		Ser
		227	5				228	0	Thr			228	5		
Val		Lys 0		Pro	Val	Asn 229		Leu	Thr	Gly	Pro 230		Asn	Val	Leu
Thr	Thr	Pro	Val	Asn	Ala	Thr	Val	Gly	Thr	Val	Asn	Ala	Ala	Pro	Gly
230					231					231					2320
				232	5				Asn 233	0				233	5
			234	0				234					2350	0	
		235	5				2360	)	Ala			236	5		
	237	)				237	5		Glu		2386	)			
		Met	Pro	Val			Asp	Arg	Pro	Ala	Asp	Ala	Gly	Ser	Gly
238		_			239					239					2400
				240	5				Gly 2410	)				2415	5
			2420	)			·	242	-				2430	)	
Gln	Ile	Pro 2435		Ala	Ser		Met 2440		Ile	Glu	Phe	Gln 2445		Ser	Val
Ser	Lys 2450		Gln	Val	Lys	Pro 2455		Ser	Val	Thr	Ala 2460		Gln	Pro	Pro
Ser	Lys	${\tt Gl}{\tt Y}$	Pro	Gln	Ala	Pro	Ala	Gly	Tyr	Ala	Asn	Val	Ala	Thr	His
2465					2470					2475					2480
				2485	5				Tyr 2490	)				2495	5
			2500	)				2505	5		-		2510	,	Ile
		2515	5				2520	)	Gln			2525	5	-	
	2530	)				2535	5		Val		2540	)			
		Thr	Pro	Ser	Ile	Val	Thr	Thr	Asn	Lys	Lys	Leu	Ala	Asp	Pro
2545					2550					2555					2560
				2565	<b>.</b> .				Leu 2570	)				2575	;
			2580	)				2585					2590	)	
Thr	Glu	Val 2595		His	Val	Pro	Ser 2600		Pro	Ser	Ile	Pro 2605		Asp	Arg
Thr	Val 2610		His	Leu	Ala	Ala 2615		Lys	Leu	Asp	Ala 2620	His		Pro	Arg
Pro			Pro	Gly	Pro			Phe	Pro	Ara			His	Pro	Ser
2625		•		•	2630		<del>-</del>			2635					2640
Ser-	Thr	Ala	Ser	Thr 2645		Leu	Ser	Thr	Asn 2650	Ala		Val	Met	Leu 2655	Ala
Ala	Glv	Ile	Pro			Gln	Phe	Tle			Tle	Hic	Pro		Gln

			2660	٦				2669					2670	,	
Ser	Val	Tle			Pro	His	Ser			Gln	Thr	Val			Ser
001	***	2679					2680			02		2689			
His	Leu		-	Glv	Glu	Val			Asn	Thr	Pro	Thr	Leu	Pro	Ser
	2690			3		2699					2700				
Ile	Thr	Tyr	Ser	Ile	Arg	Pro	Glu	Ala	Leu	His	Ser	Pro	Arg	Ala	Pro
270		•		•	2710					2719					2720
Leu	Gln	Pro	Gln	Gln	Ile	Glu	Val	Arg	Ala	Pro	Gln	Arg	Ala	Ser	Thr
				2725					2730					2735	
Pro	Gln	Pro	Ala	Pro	Ala	Gly	Val	Pro	Ala	Leu	Ala	Ser	Gln	His	Pro
			2740	)	•			2745	5				2750	)	•
Pro	Glu	Glu	Glu	Val	His	Tyr	His	Leu	Pro	Val	Ala	Arg	Ala	Thr	Ala
		275	•				2760					2769			
Pro	Val	Gln	Ser	Glu	Val	Leu	Val	Met	Gln	Ser	Glu	Tyr	Arg	Leu	His
	2770					2775					2780				
	_	Thr	Val	Pro	Arg	_	Val	Arg	Ile			His	Pro	His	
278			_		2790		_			2799		•		_	2800
Thr	Ala	Val	Ser		Gln	Pro	Arg	Ala		_	GIÀ	Val	Val	-	
<b>5</b>	B		<b>a</b>	2809		D	a1 -	<b>01</b> -	2810		<b>7</b>	<b>01</b>		2815	
Pro	PIO	Ala	2820	_	Ala	PIO	GIN	2829		GIY	ьуѕ	GIU	2830		ьys
Thr	Dro	7 cn			Ala	ת 1 ת	Dro			Thr	Pro	ת [ ת			Dro
1111	PLO	2835		гуэ	AIA	AIa	2840		PIO	1111	FIO	2845		vai	PIQ
Val	Pro			Len	Pro	Ala			Pro	Ala	Pro			Glu	Ala
	2850			~~~		2855					2860		,		
Arg			Thr	Val	Thr			Asn	Gln	Leu			Leu	Pro	Leu
286					2870					2875		•			2880
Thr	Pro	Pro	Val	Val	Val		His	Gly	Val			Val	His	Ser	
Thr	Pro	Pro	Val	Val 2885	Val		His	Gly	Val 2890	Gln		Val	His	Ser 289	Ser
				2885	Val	Thr			2890	Gln )	Ile			2899	Ser
Gly	Glu	Leu	Phe 2900	2889 Gln O	Val 5 Glu	Thr	Arg	Tyr 2905	2890 Gly	Gln ) Asp	Ile Ile	Arg	Thr 291	2899 Tyr )	Ser His
Gly	Glu	Leu	Phe 2900	2889 Gln O	Val	Thr	Arg Thr	Tyr 2905 Gln	2890 Gly	Gln ) Asp	Ile Ile	Arg Ala	Thr 2910 Ser	2899 Tyr )	Ser His
Gly Pro	Glu Pro	Leu Ala 2915	Phe 2900 Gln	2889 Gln ) Leu	Val Glu Thr	Thr Tyr His	Arg Thr 2920	Tyr 2905 Gln	2890 Gly Dhe	Gln ) Asp Pro	Ile Ile Ala	Arg Ala 2925	Thr 2910 Ser	2899 Tyr ) Ser	Ser His
Gly Pro	Glu Pro Leu	Leu Ala 2915 Pro	Phe 2900 Gln	2889 Gln ) Leu	Val 5 Glu	Thr Tyr His Lys	Arg Thr 2920 Thr	Tyr 2905 Gln	2890 Gly Dhe	Gln Asp Pro Gln	Ile Ile Ala Gly	Arg Ala 2925 Pro	Thr 2910 Ser	2899 Tyr ) Ser	Ser His
Gly Pro Gly	Glu Pro Leu 2930	Leu Ala 2919 Pro	Phe 2900 Gln Ser	2885 Gln ) Leu Arg	Val Glu Thr	Thr Tyr His Lys 2935	Arg Thr 2920 Thr	Tyr 2905 Gln ) Ala	2890 Gly Dhe	Gln Asp Pro Gln	Ile Ile Ala Gly 2940	Arg Ala 2925 Pro	Thr 2910 Ser Pro	2899 Tyr ) Ser Pro	Ser His Val
Gly Pro Gly	Glu Pro Leu 2930 Glu	Leu Ala 2919 Pro	Phe 2900 Gln Ser	2885 Gln ) Leu Arg	Val Glu Thr Thr	Thr Tyr His Lys 2935 Pro	Arg Thr 2920 Thr	Tyr 2905 Gln ) Ala	2890 Gly Dhe	Gln Asp Pro Gln Gln	Ile Ile Ala Gly 2940 Ser	Arg Ala 2925 Pro	Thr 2910 Ser Pro	2899 Tyr ) Ser Pro	Ser His Val Glu
Gly Pro Gly Gly 294	Glu Pro Leu 2930 Glu 5	Leu Ala 2915 Pro Pro	Phe 2900 Gln Ser Leu	2885 Gln ) Leu Arg	Val Glu Thr Thr Pro 2950	Thr Tyr His Lys 2935 Pro	Arg Thr 2920 Thr Gln	Tyr 2905 Gln ) Ala	2890 Gly Phe Ala	Gln Asp Pro Gln Gln 2955	Ile Ile Ala Gly 2940 Ser	Arg Ala 2925 Pro Thr	Thr 2910 Ser Fro	2899 Tyr Ser Pro	Ser His Val Glu Ala 2960
Gly Pro Gly Gly 294	Glu Pro Leu 2930 Glu 5	Leu Ala 2915 Pro Pro	Phe 2900 Gln Ser Leu	2885 Gln Leu Arg Gln	Val Glu Thr Thr Pro 2950 Cys	Thr Tyr His Lys 2935 Pro	Arg Thr 2920 Thr Gln	Tyr 2905 Gln ) Ala	2890 Gly Phe Ala Val	Gln Asp Pro Gln Gln 2955	Ile Ile Ala Gly 2940 Ser	Arg Ala 2925 Pro Thr	Thr 2910 Ser Fro	2899 Tyr ) Ser Pro Pro	Ser His Val Glu Ala 2960 Gln
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Tyr Ile Lys Lys Ser Phe Pro Asp Met His Ala His Met Arg Arg His
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390

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